

TC-FX707R

SERVICE MANUAL

*US Model
AEP Model
E Model*



'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

SPECIFICATIONS

Recording system 4-track 2-channel stereo
Fast-forward and rewind time Approx. 90 sec. (with C-60 cassette)
Bias frequency 105 kHz
Signal-to-noise ratio (NAB, at peak level)

Cassette	Dolby NR button	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METALLIC)		59 dB	66 dB	72 dB
TYPE III (Sony FeCr)		60 dB	67 dB	73 dB
TYPE II (Sony UCX)		58 dB	65 dB	71 dB
TYPE I (Sony BHF)		54 dB	61 dB	67 dB

Total harmonic distortion 1.0% (with Sony METALLIC and FeCr cassettes)
Frequency response DOLBY NR OFF
• With TYPE IV cassette (Sony METALLIC)
20 - 19,000 Hz
30 - 17,000 Hz (± 3 dB)
30 - 13,000 Hz (± 3 dB, 0 VU recording)
• With TYPE III cassette (Sony FeCr)
20 - 19,000 Hz
30 - 17,000 Hz (± 3 dB)
• With TYPE II cassette (Sony UCX)
20 - 19,000 Hz
30 - 17,000 Hz (± 3 dB)
• With TYPE I cassette (Sony BHF)
20 - 17,000 Hz

Wow and flutter 0.04% WRMS (NAB)
 $\pm 0.14\%$ (DIN)

Inputs Microphone inputs (phone jacks)
Sensitivity 0.25 mV (-70 dB)
For a low-impedance microphone
Line inputs (phono jacks)
Sensitivity 77.5 mV (-20 dB)
Input impedance 50 k ohms


Tape Transport Mechanism	TCM-110R1, R2
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Outputs Line outputs (phono jacks)
Rated output level 0.44 V (-5 dB) at load impedance 50 k ohms, with the LINE OUT/PHONE control at "00"
Output level variable from 0.014 V to 0.44 V
Load impedance over 10 k ohms
Headphone output
Output level variable from -26 dB to -56 dB at a load impedance of 8 ohms

General
Power requirements 120V ac, 60Hz (US model)
220V ac, 50/60Hz (AEP model)
(240V ac adjustable by authorized Sony personnel)
110, 120, 220 or 240V ac adjustable, 50/60 Hz (E model)
Power consumption 25 watts (US, AEP model)
27 watts (E model)
Dimensions Approx. 430 x 105 x 275 mm (w/h/d)
(17 x 4 $\frac{1}{4}$ x 10 $\frac{7}{8}$ inches)
including projecting parts and controls
Weight Approx. 6.2 kg (13 lbs 11 oz)

0 dB = 0.775 V

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

STEREO CASSETTE-CORDER
SONY®



TC

FEATURES

Auto-reverse recording and playback

Continuous recording and playback of both sides of the cassette is possible without turning the cassette over. When the tape reaches its end, the roto-bilateral record/playback head reverses position and the other side of the cassette will be recorded or played back automatically.

The roto-bilateral head assures the same performance characteristics in either tape transport direction.

Quick reverse

The head reverses position quickly when the tape reaches the leader tape at the end when recording or playing back the front side of a cassette, allowing recording or playback to be continued with little interruption.

Digital level monitor

The digital level monitor displays the input level exceeding the proper recording level in dB so that you can readjust the recording level appropriately.

Automatic fader

During recording, special fade-in and fade-out effects can be made automatically simply by pressing the AUTO FADER button.

Automatic attenuator

The automatic attenuator lowers the recording level automatically when the level of input signals is beyond the proper recording level. This assures undistorted recording.

Audio memory

The recording and playback settings: the recording level, the Dolby NR setting, for example, can be memorized and instantly retrieved. Two settings can be made for each type of tape.

Function memory

A total of 8 steps of tape operations controlled by the ►, ◀, ►►, ◀◀ and RESET buttons can be memorized and activated in the memorized sequence by pressing one button.

Cassette stabilizer

The cassette stabilizer holds the cassette firmly to suppress vibration and makes the reproduced sound clear and the location of the sound image stable.

Digital display

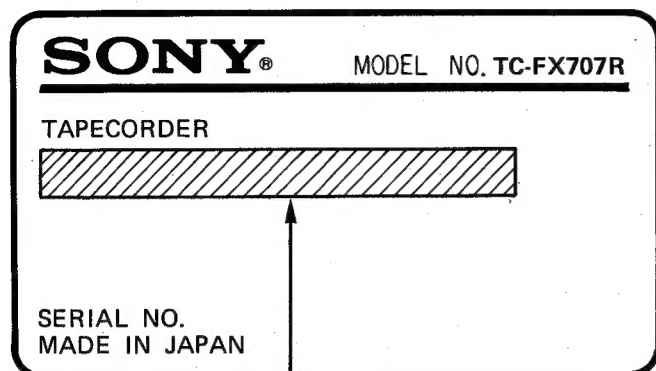
The recording level, recording level balance and LINE OUT/headphone level are displayed in digits for accurate and easy reading.

Other useful functions

- The LA (LaserAmorphous) record/playback head provides a wider dynamic range and a more extended frequency response.
- The C-type Dolby NR system reduces tape noise twice as effectively as the conventional B-type system.
- The AMS (Automatic Music Sensor), blank skip and music scan functions allow you to locate the desired selection easily.
- The DIRECTION MODE buttons control the direction of tape movement.
- The automatic tape select system adjusts the cassette deck to achieve the optimum recording and playback characteristics for each tape type.
- The digital linear counter indicates the elapsed or remaining recording or playback time in minutes and seconds. The pre-end winker warns that the tape is about to run out during recording.
- Remote control operations are possible.
- The deck can be turned on and off using an optional timer.

MODEL IDENTIFICATION

— Specification Label —

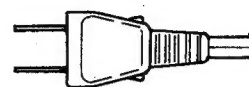
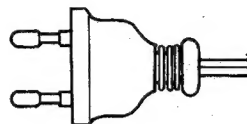


US model: AC: 120 V 60 Hz 25W
 AEP model: AC: 220 V 50/60 Hz 25W
 E model: AC: 110, 120, 220, 240 V 50/60 Hz 27W

— Power Cord —

E₃ model: euro-plug
 1-555-734-00

E₂ model: parallel-blade plug
 1-551-472-00



SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

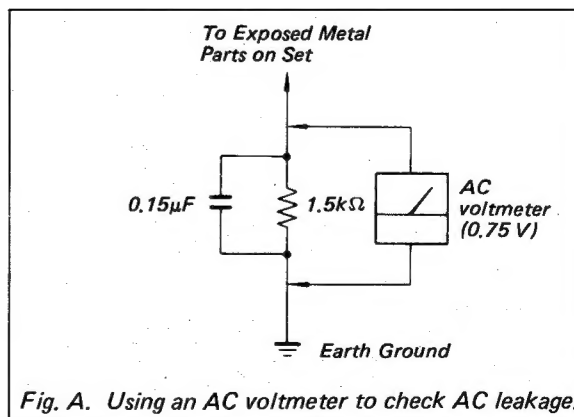
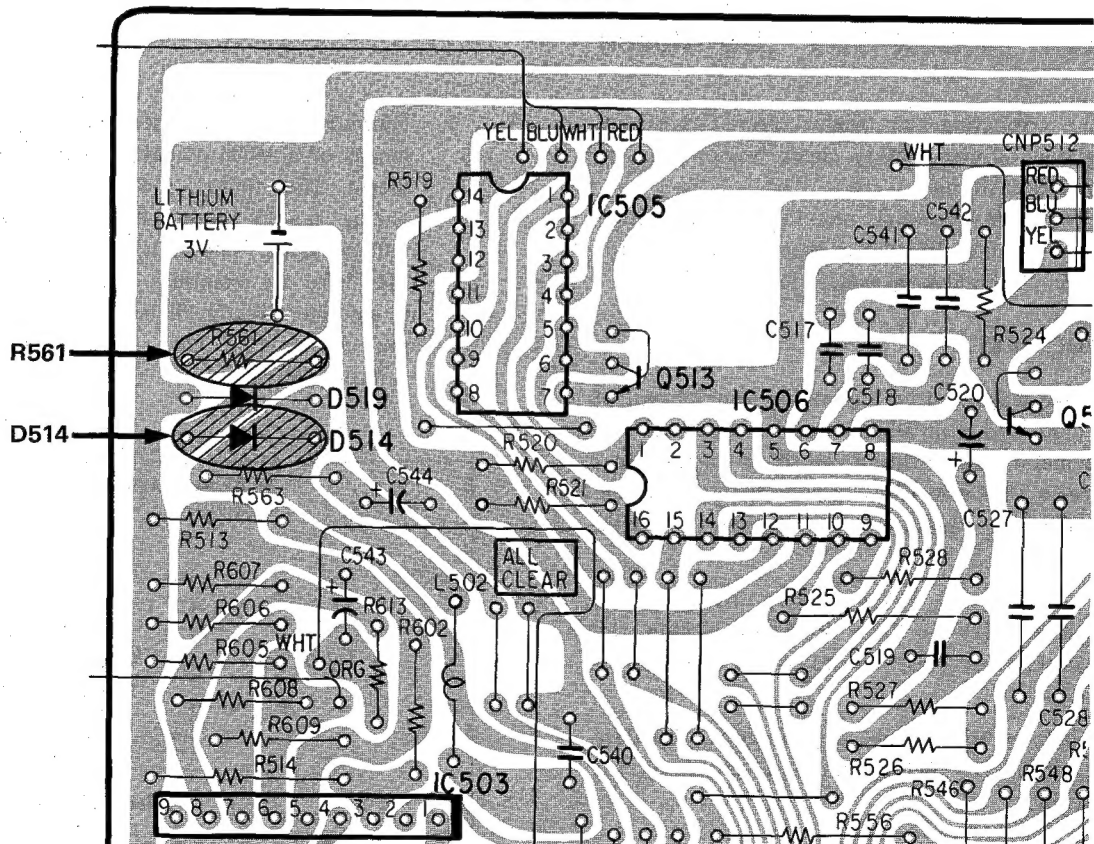


Fig. A. Using an AC voltmeter to check AC leakage.

Servicing Precaution

1. Before starting to replace ICs or other parts, be sure to turn off the back-up battery by disconnecting R561 or D514.
2. After completing to repair, connect R561 or D514 and proceed as follows as soon as possible, to return to normal back-up mode. Otherwise, the energy of the back-up battery will be wasted.
 - (1) Turn on the power.
 - (2) Short the "ALL CLEAR" jumper wire instantly with a screwdriver.
 - (3) Turn off the power.
3. When the power is turned off, and the back-up battery is connected, never short the conductive pattern on the circuit board.
4. When CT301 is adjusted, an insulating tube should be over an adjustment screwdriver used.

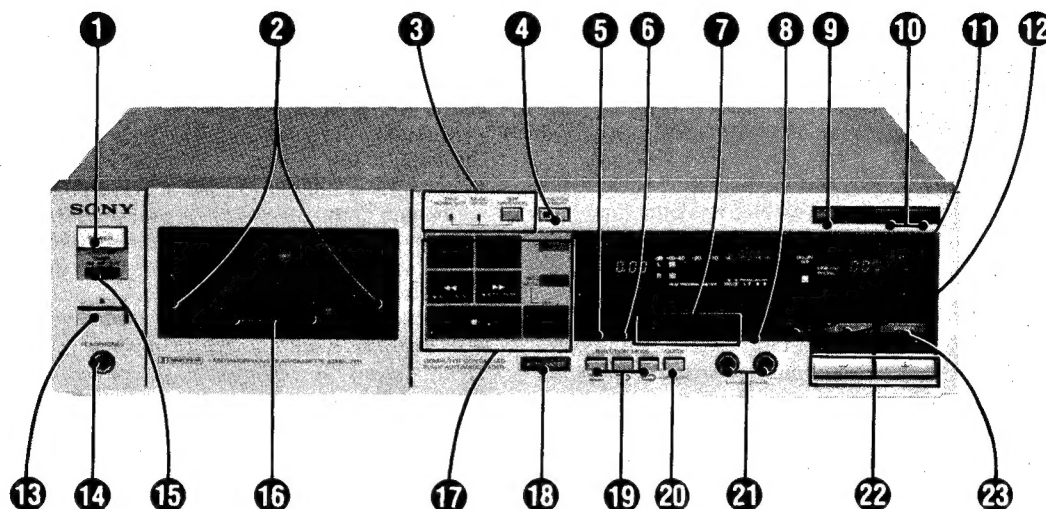
[SYSTEM CONTROL BOARD]



FUNCTION OF CONTROLS

Each number in the text is keyed to that of the photo and illustrations.

Front panel



① POWER switch

This turns the power on or off.

② Cassette stabilizer

③ TAPE OPERATION button and indicators

To activate the AMS/blank skip function or the music scan function, press the TAPE OPERATION button, so that the corresponding indicator lights up. Each time the button is pressed, the AMS/BLANK SKIP indicator, MUSIC SCAN indicator or no indicator lights up in sequence.

④ FUNCTION MEMORY button and indicator

Used for memorizing a series of tape operations and starting the memorized operations. (See "Function memory" on page 14.)

⑤ RESET button

Press to reset the tape counter to zero.

⑥ MEMORY button

Used for the memory stop/play. See page 14.

When this button is pressed, the MEMORY indicator appears on the display.

⑦ AUTO/III tape select button and tape type indicators

When a cassette is inserted, the appropriate tape type indicator lights up and the optimum recording and playback settings for the tape are set by the automatic tape select system. Press this button if the indicator and the type of tape inserted are not the same. This button is operable only when a cassette has been inserted.

⑧ DOLBY NR button

Press this button to select the Dolby* NR system when recording or playing back. The type of Dolby NR system applied will change in the following sequence when the button is pressed: Dolby NR B type (B indicator illuminates), Dolby NR C type (C indicator illuminates), Dolby NR off (indicator off).

⑨ WRITE button

When memorizing the recording and playback settings on the AUDIO MEMORY buttons, first press this button, then the A or B AUDIO MEMORY button.

⑩ AUDIO MEMORY buttons and indicators

The recording and playback settings for each type of tape can be memorized on A and B buttons. The memorized settings can be retrieved simply by pressing the A or B button. See page 10.

⑪ LINE OUT/PHONE level control button

This button adjusts the output level of the LINE OUT jacks and the headphone level. When the + side of the button is pressed, the level will increase by 2 dB, and when the - side is pressed, the level will be attenuated by 2 dB, up to 30 dB. When the button is kept depressed, the level changes continuously. The attenuated level is indicated on the audio level display. The digits "00" indicate the maximum output level.

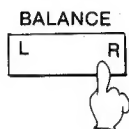
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— Continued on next page —

12 BALANCE (recording level balance) control button

This button adjusts the balance of the left and right channel recording levels. When the L side of the button is pressed, the sound image to be recorded will be moved to the left as the level of the right channel is attenuated. When the R side is pressed the sound image will be moved to the right. The difference of the level in dB between two channels is displayed on the audio level display. Normally set the balance to 00.

Example of the balance setting



The right channel level is 2 dB higher than the left channel level.

13 (eject) button

Press this button to open the cassette holder.

14 HEADPHONES jack (stereo phone jack)

Connect a pair of headphones either to monitor the input signals to be recorded or to listen to a recording in the playback mode.

15 TIMER switch

You can set the unit to record or playback at a predetermined time by connecting any commercially available timer.

16 DIRECTION indicators

▷ (forward) indicator: Lights to show that the front side of the cassette is being played back or recorded on.

◁ (reverse) indicator: Lights to show that the reverse side of the cassette is being played back or recorded on.

For a timer-activated recording or playback, make sure which indicator is illuminated.

17 Function buttons

It is possible to switch directly from one mode to another.

▶ (forward) button: Press this button to play the front side of the cassette. To record, press this button while holding the ● button down. The tape is transported to the right.

◀ (reverse play) button: Press this button to play back the reverse side of the cassette. To record on the reverse side, press this button while holding the ● button down. The tape will be transported to the left.

▶▶ (fast-forward) button: Press this button to advance the tape rapidly to the right. It is also used for the AMS and music scan functions.

◀◀ (fast-reverse) button: Press this button to advance the tape rapidly to the left. It is also used for the auto play, AMS and music scan functions.

■ (stop) button: Press this button to stop the tape, or to disengage the ● button or the FUNCTION MEMORY button.

● REC (record) button: Press this button together with the ▶ or ◀ button to start recording. When this button is pressed for recording level adjustment, the deck will detect the tab of the cassette and the indicators of the ◀ and ▶ buttons will blink to indicate that a recording can be made. If the tab on one side is removed, the corresponding indicator will not light.

○ REC MUTE (record muting) button: Press this button to eliminate unwanted material and to insert a blank space during recording.

■ PAUSE button: Press this button to stop the tape running for a moment during recording or playback.

18 AUTO FADER (automatic fader) button

Press this button to fade in or fade out the recording.

19 DIRECTION MODE buttons

Depress one of the buttons to select the mode of tape movement for recording and playback.

↔ (one-direction) button: To record or play back one side of the cassette.

↻ (one-cycle) button: To record or play back both sides of the cassette. If this button is pressed when the reverse side of the cassette is being recorded or played back, the tape will stop at the end of that side.

⌚ (five-cycle) button: To play back both sides of the cassette five times. If this button is pressed when the reverse side of the cassette is being recorded or played back, the tape will stop at the end of the 5th playback of the reverse side so that the front side will have been played back only four times.

The recording will stop at the end of the reverse side.

20 QUICK reverse switch

Depress this switch (ON) to reverse the direction of the tape quickly during recording or playback, when the tape reaches the leader tape.

To release the quick reverse function, press the switch again. The tape will reverse the direction at the end of the leader tape.

This quick reverse function operates only from the forward direction to the reverse direction.

21 MIC jacks (phone jack)

Any low-impedance microphone equipped with a phone plug may be used.

22 REC LEVEL (recording level) control buttons

Adjust the recording level by observing the peak program meters and the digital level monitor. Press the + button to increase the level, and the - button to decrease it. Each time the button is pressed, the level will change by 1 dB. When the button is held down, the level will change by 2 dB continuously. The attenuated level is displayed on the audio level display. The digits "00" indicate the maximum level.

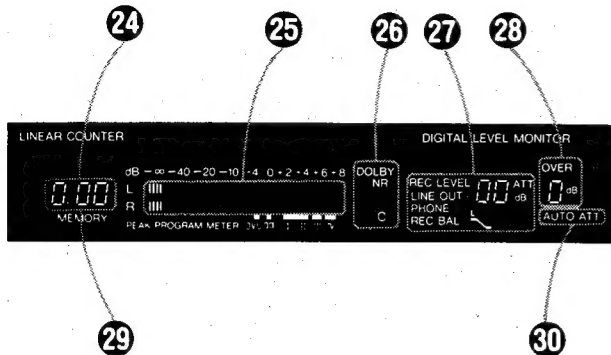
23 AUTO ATTENUATOR (automatic attenuator) button

Press this button to attenuate the preset recording level automatically when the input level is too high, so that the recording will not be distorted. The AUTO ATT indicator appears on the display. Press this button again to cancel the automatic attenuator function.

When the automatic attenuator is engaged, the digital level monitor display does not operate and always indicates



Display section



24 Digital linear counter

Indicates the tape running time. See "Digital linear counter" on page 11.

25 Peak program meters

These meters show the peak input level of each channel during recording, and recorded levels in the playback mode. For easy reading the highest input of each channel is held for about 4 seconds on the scale, except when a higher peak occurs before 4 seconds have passed, in which case that peak is immediately indicated.

26 Dolby NR indicator

The selected Dolby NR B or C type is indicated here.

27 Audio level display

The attenuated level set by the REC LEVEL buttons, LINE OUT/PHONE button, or BALANCE button is indicated here.

- When the REC LEVEL button is pressed, the display shows the recording level (REC LEVEL).

When the + REC LEVEL button is pressed, the display will count down to **80dB** (maximum recording level). When the - button is pressed, the display will count up to **55dB**, and then to **-∞dB** (infinitesimal level).

- When the LINE OUT/PHONE button is pressed, the display shows the output level of the LINE OUT jacks or the headphone level (LINE OUT/PHONE).

When the + side of the button is pressed, the display will count down to **100dB** (rated output level). When the - side is pressed, the display will count up to **30dB** (the minimum output level) in 2 dB steps.

- When the BALANCE button is pressed, the display shows the recording level balance of the right and left channels (REC BAL).

The display **000dB** indicates the sound image is at the center. Pressing the L side will move the sound image to the left, shown by **L**. Pressing the R side will move the sound image to the right, shown by **R**. The **L** or **R** display will remain when the digit display is changed to the REC LEVEL indicator.

- When the BALANCE or REC LEVEL button is released, the display will automatically revert to the LINE OUT/PHONE level indicator, or the REC LEVEL indicator if the **●** button is engaged.

28 DIGITAL LEVEL MONITOR

Indicates the input level exceeding the proper recording level for each type of tape, in 1 dB steps. When the input level is lower than the proper level, the display remains **0dB**.

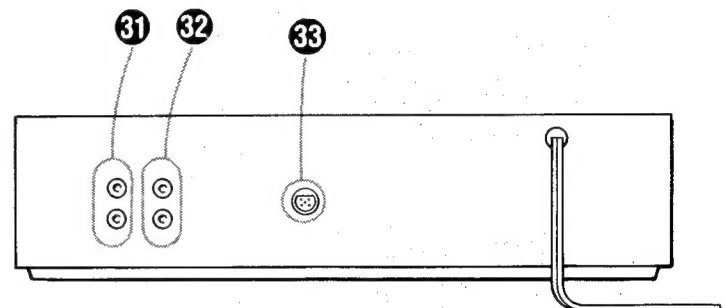
29 MEMORY indicator

When the MEMORY button is pressed, this indicator shows that the memory counter function is engaged.

30 AUTO ATT (automatic attenuator) indicator

When the AUTO ATTENUATOR button is pressed, this indicator appears to indicate the automatic attenuator is engaged.

Rear panel



31 LINE IN (line inputs) jacks (phono jack)

Accepts tape outputs from an amplifier for tape recording and line outputs from another tape deck when duplicating a tape from that unit.

32 LINE OUT (line outputs) jacks (phono jack)

Accepts tape inputs from an amplifier for playing back a tape and line inputs from another tape deck for duplicating a tape onto that unit.

33 REMOTE control connector

Connect the optional RM-70 remote control unit to operate the tape transport functions from a distance. The tape deck function buttons are still operative when the remote control unit is connected. Read the instruction manual of your remote control unit before operating.

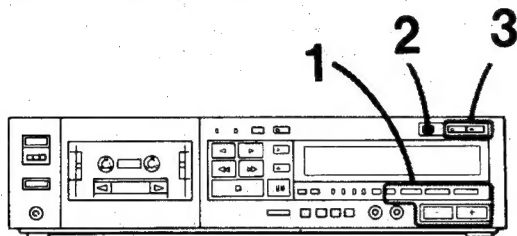
RECORDING AND PLAYBACK USING THE AUDIO MEMORY

This cassette deck can memorize and retrieve recording and playback settings. Two different settings can be memorized for each of the four types of tape (a total of 8 settings), on the A and B AUDIO MEMORY buttons.

Once a setting has been memorized, you can retrieve it only by pressing the same button.

The recording level, recording level balance, line out/headphone level, Dolby NR system and automatic attenuator ON/OFF settings can be memorized.

TO MEMORIZE THE SETTINGS



1 Adjust the settings to be memorized.

2 Press the WRITE button.

The indicators on both A and B AUDIO MEMORY buttons blink.

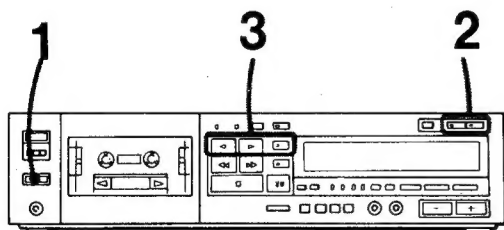
3 While the indicators are blinking (about 3 seconds), press either the A or B button on which you want to memorize the settings.

The indicator of the pressed button will light steadily to indicate the settings have been memorized.

Repeat the same steps to memorize other settings for the same type of tape on the other AUDIO MEMORY button, and settings for the other types of tape.

Once the settings are memorized, they cannot be cancelled until new settings for the same type of tape are memorized on the same AUDIO MEMORY button. We recommend that you label the cassette according to the AUDIO MEMORY button used.

TO RECORD OR PLAY BACK USING THE AUDIO MEMORY



1 Press the  button and insert a cassette.

2 Press the A or B AUDIO MEMORY button.

The settings for the type of tape inserted will be recalled.

3 Start recording or playback.

When the cassette is changed to one with a different type of tape or when the AUTO/III button is pressed while the indicator of the A or B AUDIO MEMORY button is illuminated, the settings of the button will be recalled for the type of new cassette.

TO CHANGE SOME OF THE SETTINGS ON A BUTTON

Simply change the settings as you want. The original settings memorized can be recalled later simply by pressing the AUDIO MEMORY button again.

If you change the recalled settings, the indicator on the AUDIO MEMORY button goes off.

Note on the memory back-up circuit

The settings memorized on the AUDIO MEMORY buttons and the figures of the tape counter will not be cancelled even when the power is turned off, because of a built-in memory back-up battery. When the power is turned on again, the memorized settings which there were just before the power was turned off will be recalled. If the memory back-up battery is exhausted after prolonged use, the memory contents will be cancelled. Set the controls as required before recording or playback. The battery can be replaced by your Sony dealer.

Note: Even if the battery is exhausted, the other operations of the cassette deck can be activated normally.

DIGITAL LINEAR COUNTER

The first two digits of this tape counter show the approximate recording or playback time in minutes, and the last two digits show the seconds. The figures increase as the tape runs to the right, and decrease as the tape runs to the left, shown with a minus sign if they go beyond 0.00.

The figures on the tape counter and the memory counter function are memorized while the power is turned off.

TO INDEX THE WHOLE TAPE

Before recording or playback, press RESET.

The counter shows 0.00.

As the tape runs, the figures of the counter change. Note the numbers and the program being recorded or played back. Any point of the tape can be easily located later by reference to these numbers.

TO CHECK THE AVAILABLE RECORDING TIME ON ONE SIDE

1 At the beginning of the tape, press RESET.

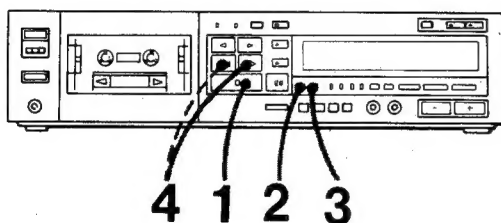
The counter shows 0.00.

2 Press ►► or ◄◄.

The tape advances rapidly to the end.

At the end of the tape, the digits will show the approximate available recording time.

TO CHECK THE REMAINING RECORDING TIME



1 Press ■.

The tape stops at the point at which you wish to begin recording.

2 Press RESET.

The counter shows 0.00.

3 Press MEMORY.

The memory counter activates. (The MEMORY indicator appears.)

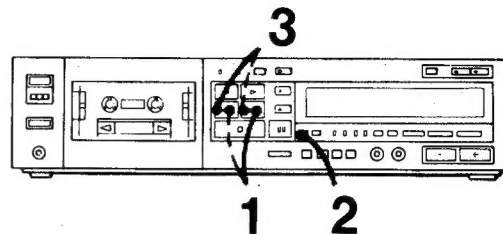
4 Press ►► or ◄◄ to advance the tape.

The tape advances rapidly to the end. As the tape is moving, the digits will show the approximate recording time that remains.

Press ◄◄ or ►► to rewind the tape.

The tape will stop at 0.00.

TO MONITOR THE REMAINING TIME WHILE RECORDING



1 Press ►► or ◄◄ to advance the tape rapidly to the end.

2 Press RESET.

The counter shows 0.00.

3 Press ◄◄ or ►► to rewind the tape to the beginning. When it reaches this point, the digits will indicate the approximate recording time on that side of the cassette.

Start recording.

The digits will change as the recording goes on, and you can monitor the remaining recording time at any point on the tape.

The function memory facilitates this tape operation. See page 14.

THE ACCURACY OF THE COUNTER

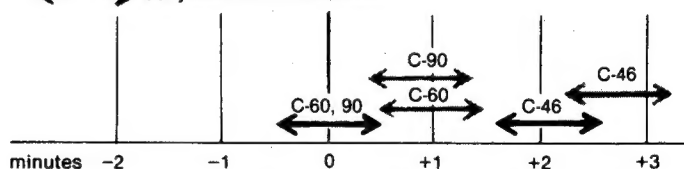
This counter is not actually a digital clock, so that the displayed figures are not exactly equal to the actual elapsed time. The accuracy will vary depending on the type of tape being used.

This counter has been designed using Sony C-60 cassettes as the standard. Make sure that the displayed time is greater than the time required when using a Sony C-46 cassette.

Difference between the counter indication and actual running time on one side of a cassette

◄◄ Sony BHF, AHF, UCX-S, UCX and FeCr cassettes

◄◄ Sony METALLIC cassettes



The counter indication is less than the actual tape running time.

The counter indication is more than the actual tape running time.

THE RECORDING PRE-END WINKER

When the tape approaches the end during recording on either side of the cassette, the digits of the counter will blink, warning that the tape is about to run out. The blinking will begin 2 to 3 minutes before the end of the tape for a Sony C-46 or C-60 cassette, and 3 to 5 minutes before the end of the tape for a Sony C-90 cassette. Note that the pre-end winker may not function when using a cassette whose hubs are very thick.

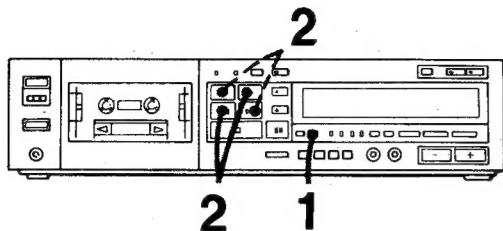
In the illustrations,

— shows the operation for the front side recording or playback.

--- shows the operation for the reverse side.

AUTO PLAY AND MEMORY STOP/PLAY

AUTO PLAY—To play from the beginning of the tape



- 1 Make sure that the **MEMORY** indicator is not displayed. (If it is displayed, press the **MEMORY** button.)
- 2 **Rewind the tape.**
To play back the front side, while keeping ◀◀ pressed, press ▶.
To play back the reverse side, while keeping ▶▶ pressed, press ◀.

After the tape is completely rewound, the tape will automatically replay.

Why does the tape stop around -0.01?

—In order to avoid cutting off the starting point.

How does one rewind the tape further than 0.00?

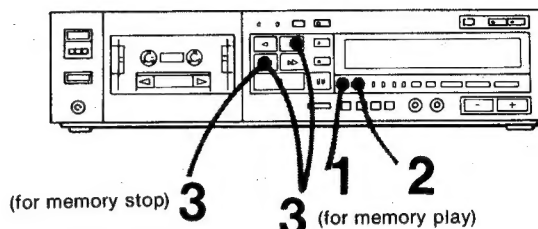
—Press the ◀◀ or ▶▶ button again.

When should one press the **MEMORY** button?

—Any time. If the **MEMORY** indicator is displayed, the tape will stop or replay automatically at the 0.00 point.

MEMORY STOP—To rewind the tape to the desired point

MEMORY PLAY—To rewind the tape and play from the desired point

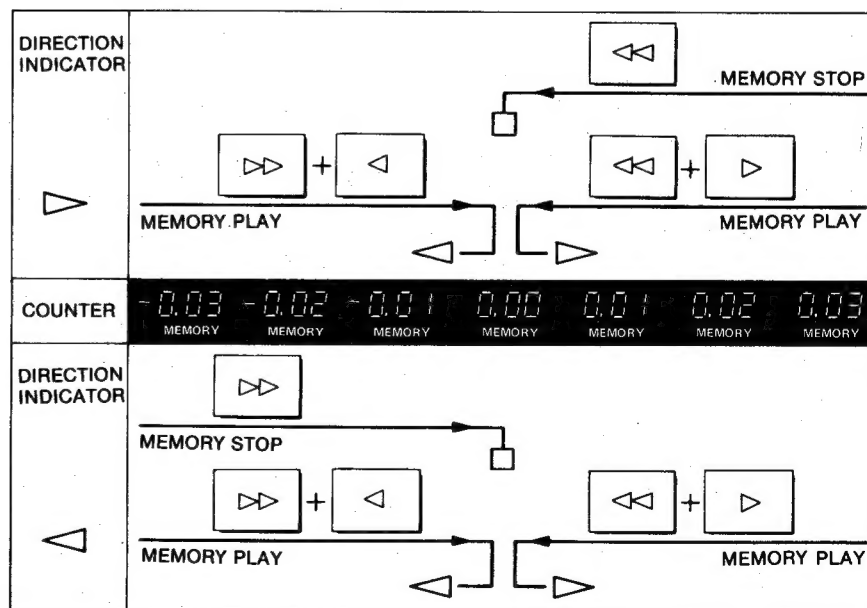


- 1 **Play back or record, and press RESET.**
The counter shows 0.00.
- 2 **Press MEMORY.**
The memory counter activates and the **MEMORY** indicator appears.
- 3 After playback or recording,
For memory stop, press ◀◀.
The tape rewinds and stops at 0.00 automatically.
For memory play, while holding ◀◀ down, press ▶.
The tape will replay automatically after rewinding to 0.00.

● You can operate the “memory stop” and “memory play” functions during playback of the reverse side of the cassette. Press the ▶▶ button for memory stop, and the ▶▶ and ◀ buttons for memory play.

● The memory play function can operate even if the **DIRECTION** indicator does not correspond to the direction of the tape to be played back.

● The **AMS** and the **music scan** functions have priority over the auto play function. When using the auto play function, make sure that none of the indicators of the **AMS/BLANK SKIP** or the **MUSIC SCAN** buttons is lights.



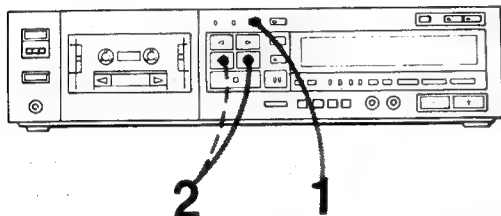
VARIOUS TAPE OPERATIONS

AMS (AUTOMATIC MUSIC SENSOR)

—To play from the beginning of the following selection or the selection being played

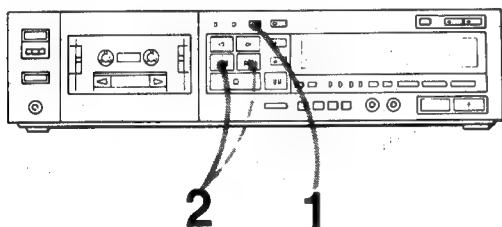
During playback, use the AMS to locate the beginning of the selection being played or the following selection. The AMS searches either forward or in reverse for the blank space between selections. Playback will begin automatically from the beginning of the selection.

To play from the beginning of the following selection



- 1 Press TAPE OPERATION to illuminate the AMS/BLANK SKIP indicator.
 - 2 During playback of the front side of the cassette (when the ► indicator lights), press ►►.
- The indicator of the ► button will blink rapidly.
- During playback of the reverse side (when ◀ lights), press ◀◀.
- The indicator of the ◀ button will blink rapidly.

To play from the beginning of the selection being played



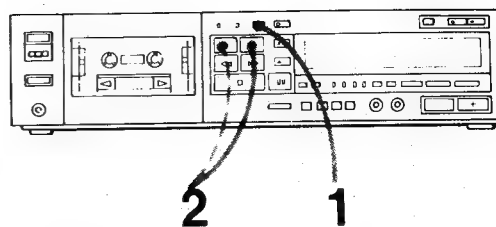
- 1 Press TAPE OPERATION to illuminate the AMS/BLANK SKIP indicator.
 - 2 During playback of the front side of the cassette (when ► lights), press ◀◀.
- The indicator of the ► button will blink rapidly.
- During playback of the reverse side (when ◀ lights), press ►►.
- The indicator of the ◀ button will blink rapidly.

If you operate the AMS at a blank space between selections, playback may begin from the beginning of the selection after the following one or from the beginning of the previous selection.

Notes

- When using the AMS function, make sure that the MEMORY indication is not displayed since the counter memory function has priority over the AMS function. If it is displayed, press the MEMORY button.
- The AMS cannot search for a selection on the other side of the cassette, even if such tape movement is selected by the DIRECTION MODE button.

BLANK SKIP —To play skipping blank spaces



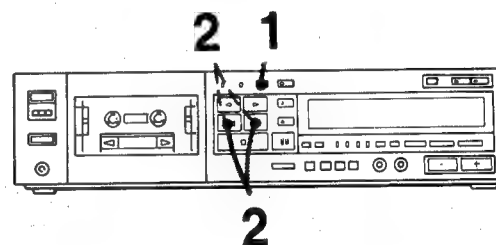
- 1 Press TAPE OPERATION to illuminate the AMS/BLANK SKIP indicator.
- 2 Start playback.

Where there is a blank about 10 seconds long, the cassette deck will automatically go into the fast-forward mode and will resume playback when a new selection begins.

Note

When the tape reaches the end in fast-forward mode, the head reverses and the fast-forward mode will continue until a new selection begins on the other side, if such tape movement is selected by the DIRECTION MODE button.

MUSIC SCAN —To play only the beginnings of all selections in sequence



- 1 Press TAPE OPERATION twice to illuminate the MUSIC SCAN indicator.
 - 2 To locate the beginnings of the selections during playback of the front side of the cassette (when the ► indicator lights) For the selections ahead, press ►►.
- For the previous selections, press ◀◀.

To locate the beginnings of the selections during playback of the reverse side of the cassette (when ◀ lights) For the selections ahead, press ◀◀.

For the previous selections, press ►►.

The deck skips the selection being played in the fast-forward or rewind mode, plays the beginning of the following selection for about 10 seconds, then goes into the fast-forward or rewind mode again. This cycle will be repeated for each selection.

During fast-forward or rewind, the indicator of the ► or ◀ button blinks rapidly.

During playback, the indicator of the ► or ◀ button blinks slowly. If the ► or ◀ button is pressed during playback, the music scan function will be cancelled and normal playback will resume. The indicator of the ► or ◀ button will light steadily.

Note

The unit will automatically shut off at the beginning or end of the side of the cassette on which the music scan started, even if one-cycle play or five-cycle play is selected by the DIRECTION MODE button.

Notes on the AMS, blank skip and music scan functions

- A low-frequency monotone signal may have been recorded for 2 seconds or so at the beginning and at the end of some commercially available recorded cassettes. If the blank skip function is used with such a cassette, it may malfunction and repeat the last selection on the tape over and over again.

If this happens, erase the monotone signal or press the TAPE OPERATION button so that neither the AMS/BLANK SKIP or MUSIC SCAN indicator illuminates.

- If there is noise in the space between selections, or if the space is less than 4 seconds long, the AMS or the music scan may not operate.

The record muting facility of this cassette deck can make a 4-second blank space that will assure correct operation on any recorded tape.

- If the recorded music includes a long pause, if it continues for a time at such low frequencies as those of a bass saxophone or at very low volume, or if its volume increases or decreases gradually, as may happen with classical music, the AMS, music scan or blank skip will treat these passages as blanks and playback will begin in the middle of a selection. If this happens, press the ►► or ◄◄ button.

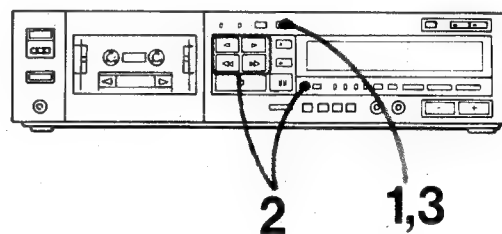
- If the ►► or ◄◄ button is pressed immediately before the following selection, the AMS, blank skip or music scan may skip the selection and search for the selection after the one immediately following.

FUNCTION MEMORY

Up to 8 steps of tape operations controlled by the ►, ◄, ►►, ◄◄ and RESET buttons can be set on the FUNCTION MEMORY button and can be executed in the memorized sequence automatically simply by pressing one button.

Examples of the operations to be memorized

- 1 ►► button → ◄◄ button
(to wind the tape uniformly)
- 2 ► button → ◄◄ button → ► button
(to repeat playback of the front side of the cassette)
- 3 ► button → ◄ button → ► button → ◄ button
(to play both sides of the cassette twice)



1 Stop the tape, and press FUNCTION MEMORY.

The indicator of the FUNCTION MEMORY button lights up.

2 Press ►, ◄, ►►, ◄◄ and RESET in the order in which you want the deck to operate later.

When a button is pressed, the indicator of the FUNCTION MEMORY button blinks once to indicate the operation has been set in the memory.

3 Press FUNCTION MEMORY again.

The memorized operation starts.

During the operation, the indicator on the FUNCTION MEMORY indicator blinks slowly.

- If more than 8 buttons are pressed to be memorized, the indicator of the FUNCTION MEMORY button blinks rapidly, indicating the memory is full. No more buttons cannot be memorized.

- To erase the memory contents while memorizing, press the ■ button.

- To cancel the on-going memory operation, press a function button or RESET button. The indicator of the FUNCTION MEMORY button goes off.

How to work the counter memory function when the memorized operation is being executed

- When the MEMORY indicator is displayed, the tape stops at the 0.00 point of the tape counter and the deck goes into the next operation memorized in the following cases.

- When the ◄◄ button is pressed with the ► indicator illuminated.
- When the ►► button is pressed with the ◄ indicator illuminated.
- When the MEMORY indicator is not displayed, the tape stops at the beginning or at the end, and the deck goes into the next operation memorized.

Notes

- While executing the memorized operations, the remote control operation, the AMS, blank skip, music scan and quick reverse functions cannot be used.

- The memorized operations have priority over the tape movement selected by the DIRECTION MODE button.

- The function memory is erased when the unit is turned off.

RECORD MUTING

By pressing the **O** button during recording, four seconds interspacing is provided automatically, eliminating unwanted program material such as broadcasting commercials. While the record muting is operating, the incoming signal is not recorded on the tape but it continues to register on the meters and feed to the monitor so that you know exactly what is going on.

- 1 Press the **O** button when the segment you do not want to record begins. The indicator of the **■** button will blink.

A blank is made while the tape continues to run and the tape path pauses automatically after four seconds.

The indicator of the **■** button will illuminate.

- 2 When you want to resume recording, press the **■** button.

The indicator of the **■** button will go off.

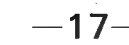
To insert a blank less than four seconds long

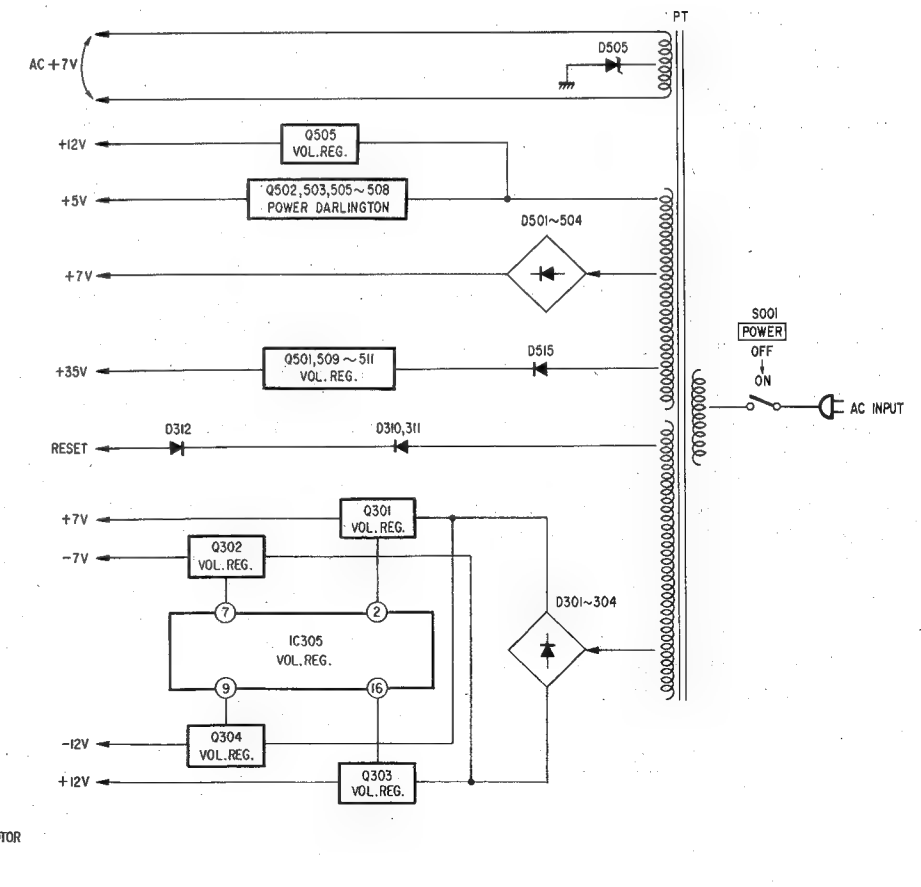
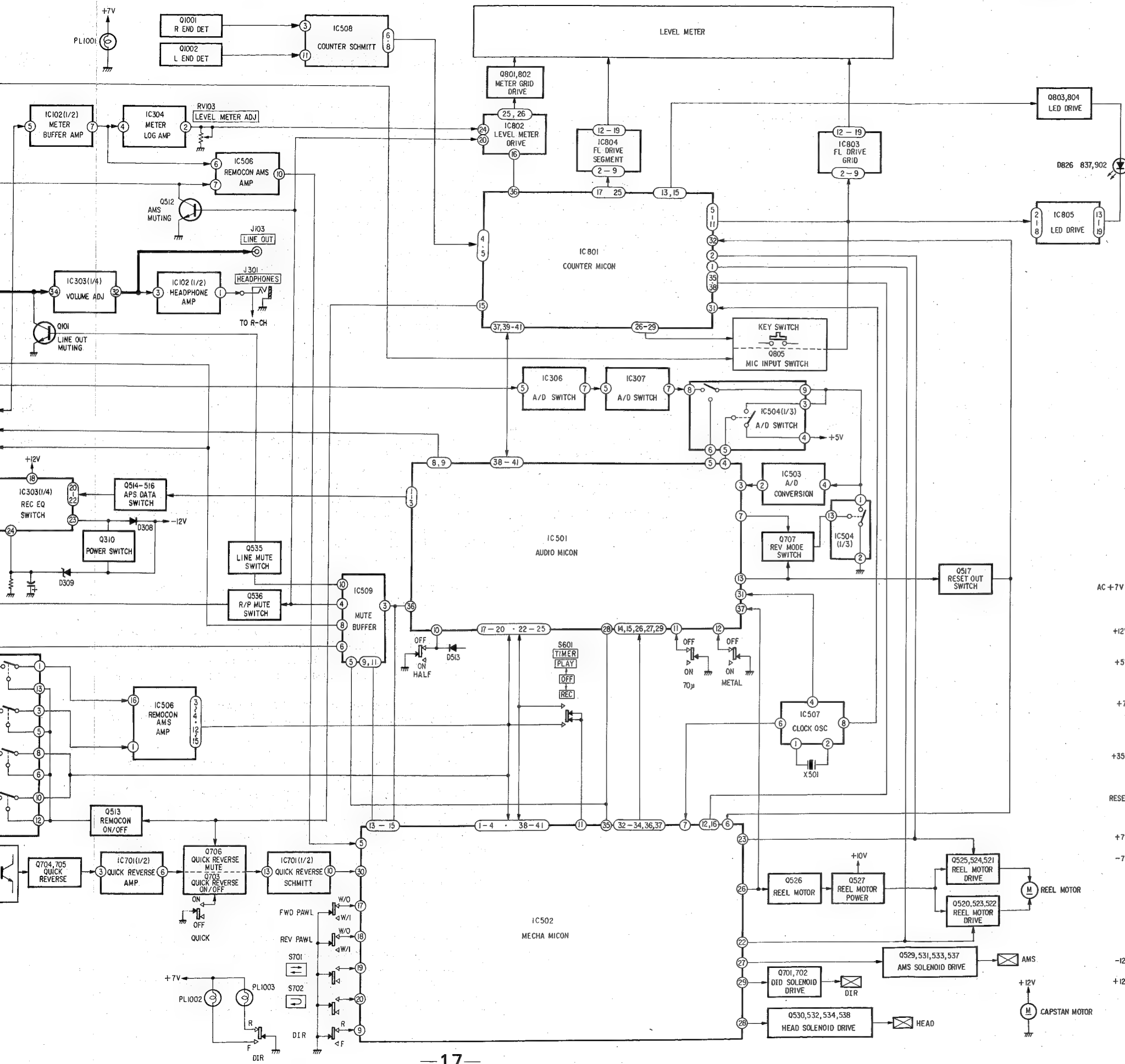
Press the **O** button to mute recording. Press the **■** button when you want to resume recording.

To insert a blank over four seconds long

Hold down the **O** button for as long as you want the blank segment on the tape to be. After four seconds, the indicator of the **■** button will blink more rapidly. When you release the **O** button, the tape deck will be in the pause mode. When you want to resume recording, press the **■** button to release the pause mode.

1-1. BLOCK DIAGRAM





1-2. CIRCUIT OUTLINE

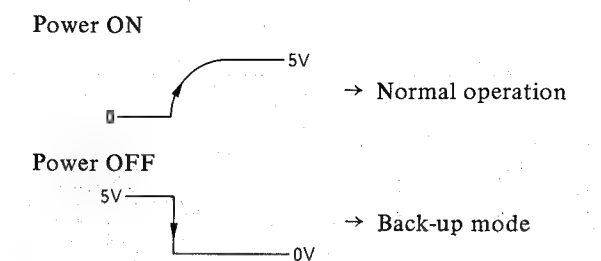
TC-FX707R is a stereo cassette deck having an ASP IC CX7919 (electronic volume control). This IC controls the volume of the audio circuit and serves as switches.

The three microcomputers are employed as mechanical controller in this set. As the data signals from each microcomputer are related with the other one, be careful to the following explanation.

1. Three microcomputers

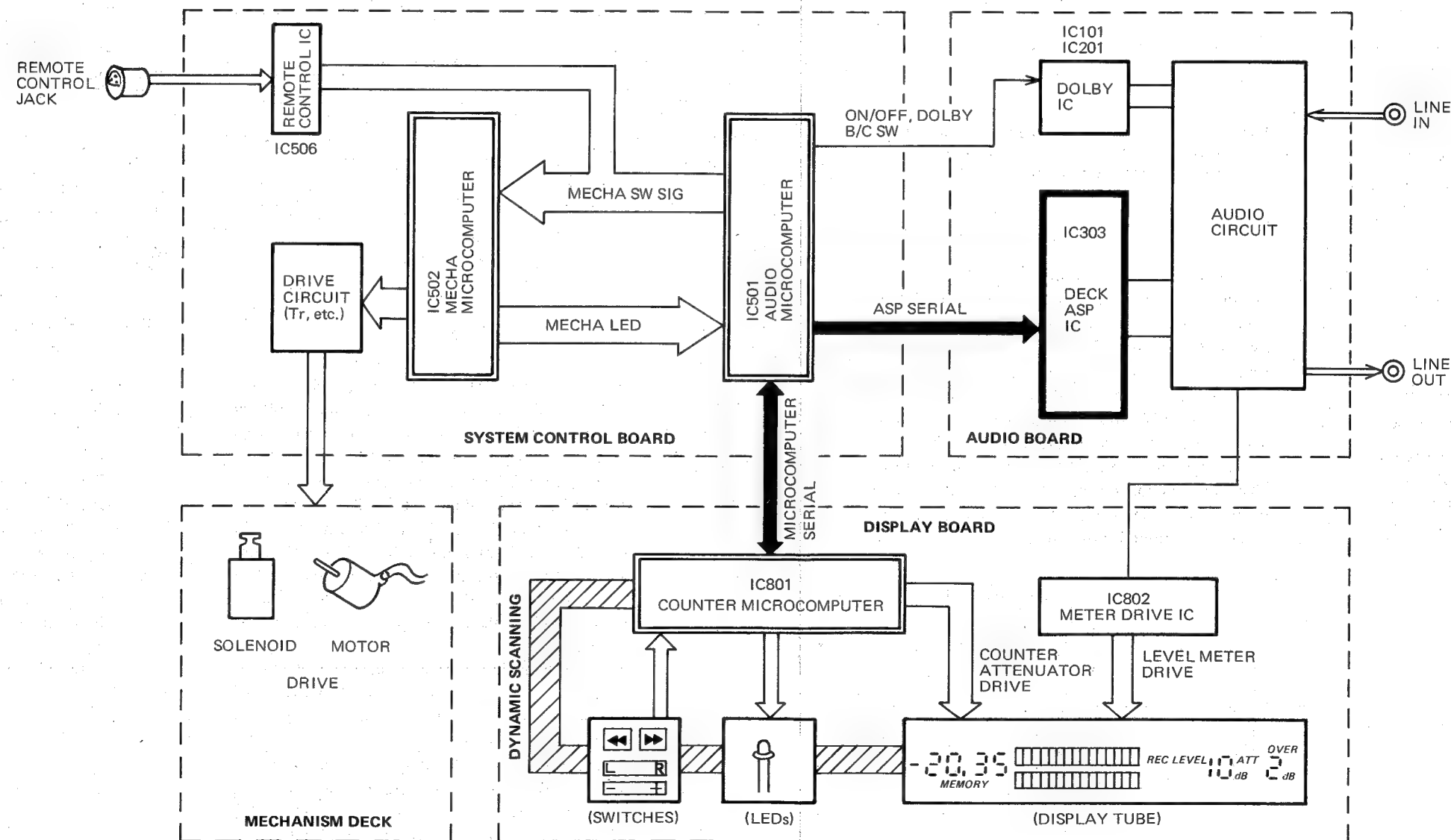
- IC501 (audio microcomputer):
ASP control, Level A/D control, memory back-up, etc.
- IC502 (mechanical microcomputer):
mechanical control, AMS, (quick reverse), etc.
- IC801 (counter microcomputer):
Linear counter, switch input, dynamic scanning of display output, etc.

- As the audio microcomputer is backed-up by lithium cell, the contents (information) of the audio memory and the value of the linear counter are not erased. Normally, reset signal is not applied to the audio microcomputer (IC501 ③④ is connected to cell). Either normal operation or back-up mode is determined according to the level at the HOLD terminal of IC501 ③④ when the power is turned on or off.

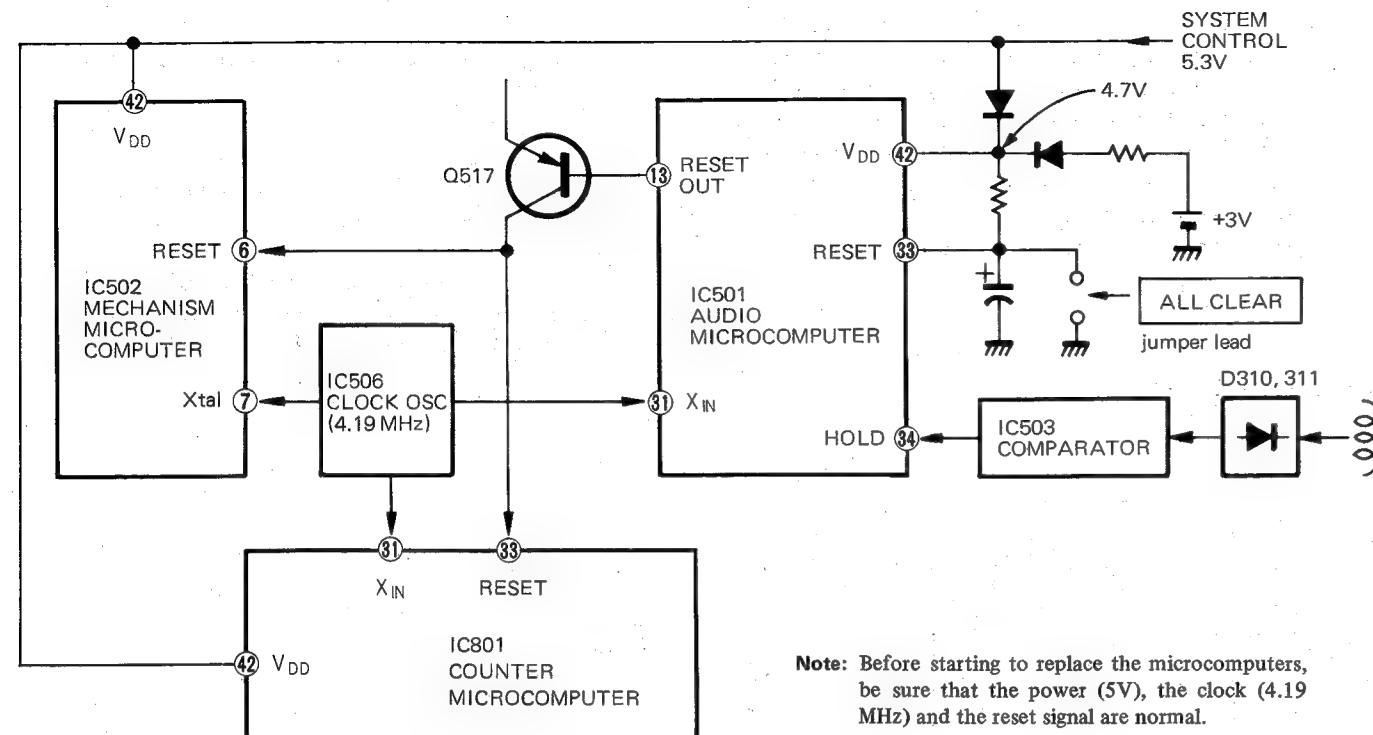


This trigger voltage is applied to IC501 ③④ from the power transformer via D310, D311 (rectifiers) and IC503 (comparator).

— Block Diagram for TC-FX707R Microcomputer System —



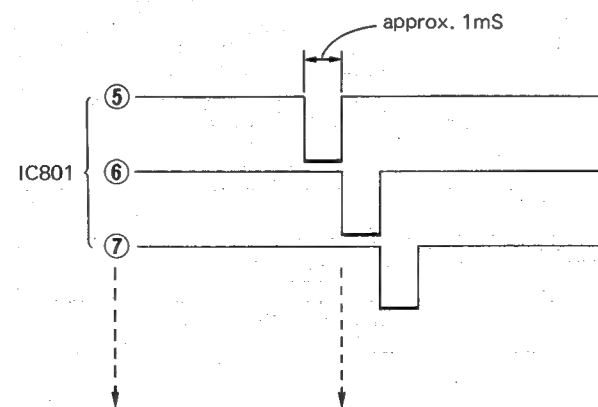
— Simplified Circuit for Power and Reset Signal Among Three Microcomputers —



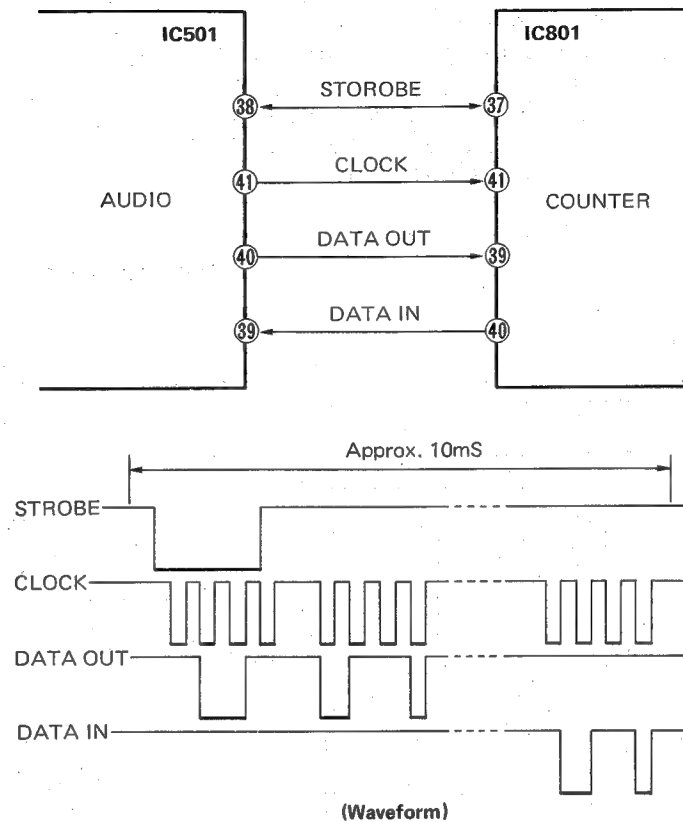
Note: Before starting to replace the microcomputers, be sure that the power (5V), the clock (4.19 MHz) and the reset signal are normal.

- IC501 is started to activate to normal operation. The level at the reset terminal ⑬ of IC501 drops to 0V from 5V (5V → 0V). The RESET OUT signal at IC501 ⑬ is inverted by Q517 and applied to IC502 ⑥ and IC801 ③③ (0V → 5V). Then, the muting for FL tube power is released and all the circuit is initialized. If this signal is not normal, the unit will not operate (The light in the cassette compartment may go on). Accordingly, the defective section will be found by tracing this signal.

- The counter microcomputer (IC801) operates dynamic scanning of the tact switch input related with all the mechanism and audio circuit and of the display output of FL tube except for the LEDs and the level meter besides common linear counter. IC801 ⑤ - ⑫ outputs the scan signal of eight figures as shown below. These signals drop to "L" level in order at intervals of approx. 1mS. However, these are scanned synchronized by dividing output of the level meter IC, IC802 ⑮. Therefore, if IC802 is defective, the dynamic scanning is not made.

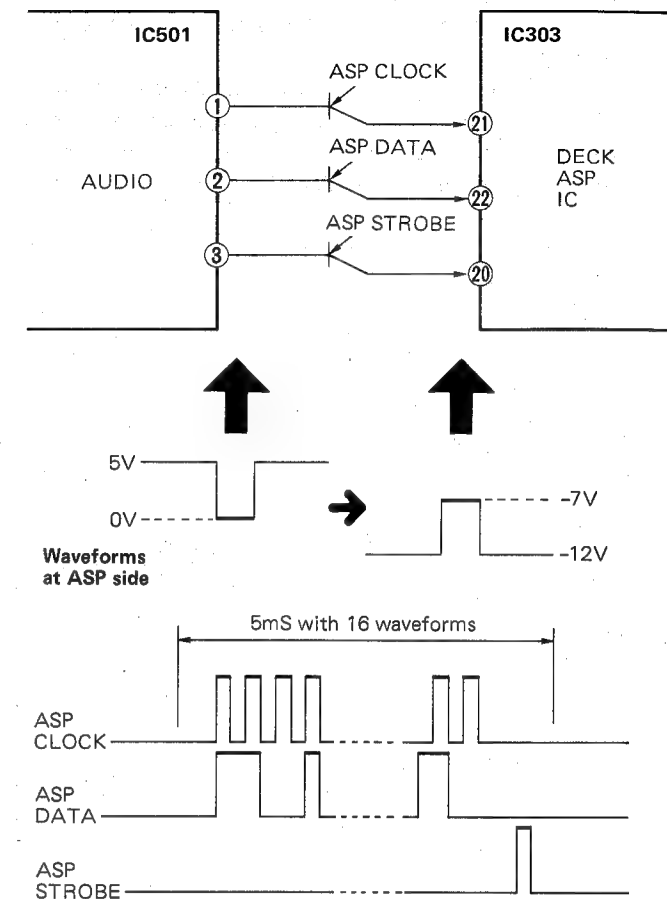


- The switch input signal and the display output signal are transferred between IC501 and IC801 by the serial data signal manner. This outputs the data according to the clock of 4 cycles and 17 pairs when the switch is pushed or released, the LED is turned on, the input or the output condition is changed and so on (See figure below).



- The switch inputs (for example; ▶, ◀ switches) and the display outputs (for example; ●, ■ lamps) of IC502 are transferred in serial operation and connected to the controls on the front panel via the IC501, which executes serial-parallel conversion. Accordingly, if IC501 or the serial data bus is defective, the mechanism deck will not operate. As mentioned in the block diagram, the remote-control input is directly connected to IC502 via IC506. Therefore, if the mechanism is operated by using the remote control, IC502 is normal.
- The configuration of this audio circuit is almost the same as that of common one. The difference between them is that the mechanical level controls and the switches are integrated in the ASP IC (IC303) as a semiconductor switch. The bias current switching depending on tape type is made by variable dc output from IC303 ⑲. IC303 is controlled by the ASP serial data from IC501. The ASP data are outputted when the

audio condition is changed (for example, when the record level or the tape type is changed) as shown below. The ASP signal is phase-inverted and level-shifted by Q514-Q516.



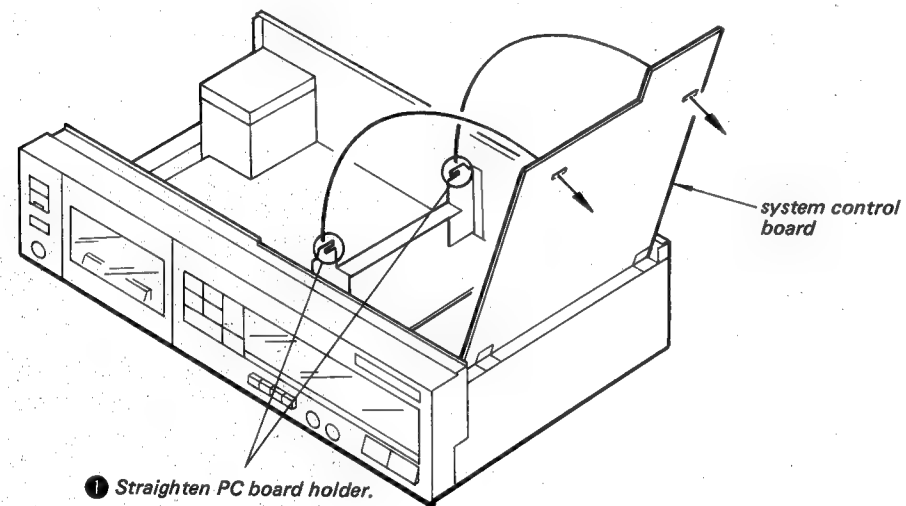
- The recording level detection A/D converter circuit for the digital level monitor and the automatic attenuator function is controlled by IC501. The recording signal passed in the A/D amplifier (IC501) is rectified, sampled by IC504 to L-CH and R-CH, and charged in C513. It is discharged by IC514.
- After replacing the microcomputers or cell, be sure to initialize the microcomputers by applying the reset signal. This can be performed by shorting the "ALL CLEAR" jumper wire near the cell on the system control board with a screwdriver.

SECTION 2 DISASSEMBLY

- Follow the disassembly procedure in the numerical order given.

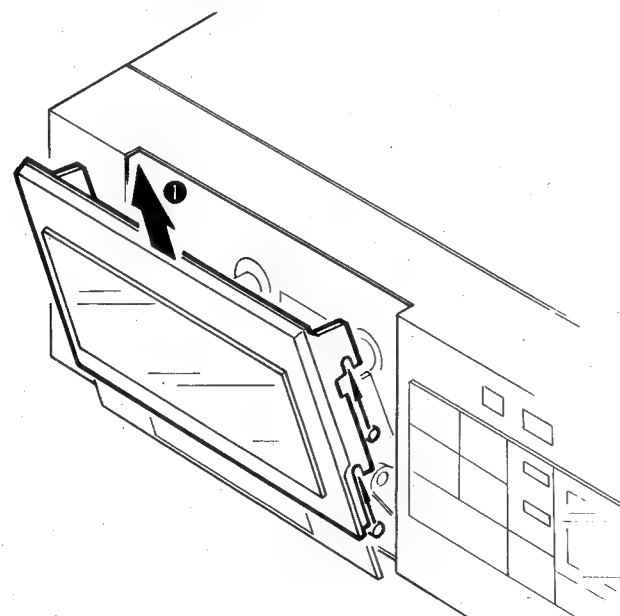
Remove the top cover.

System Control Board

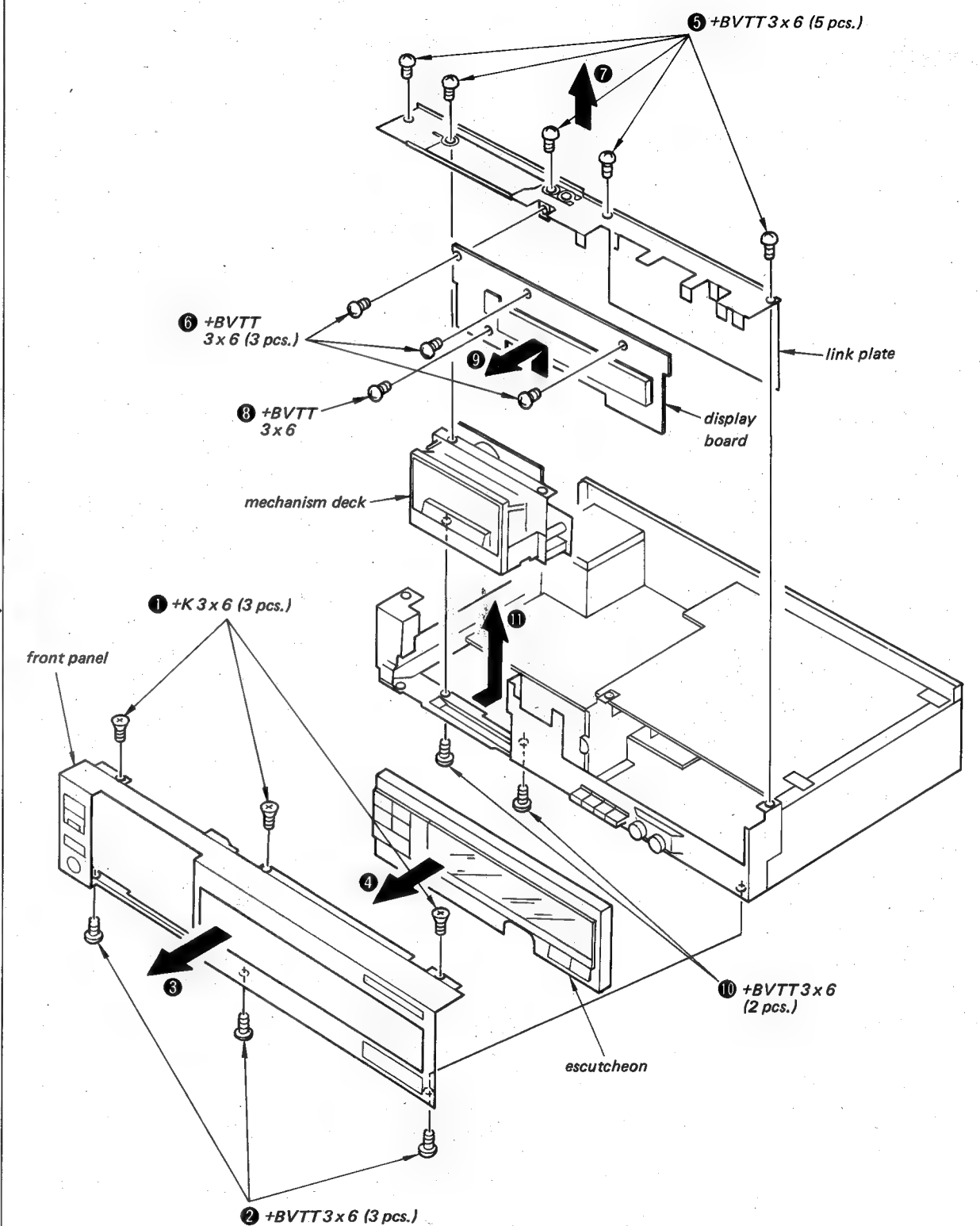


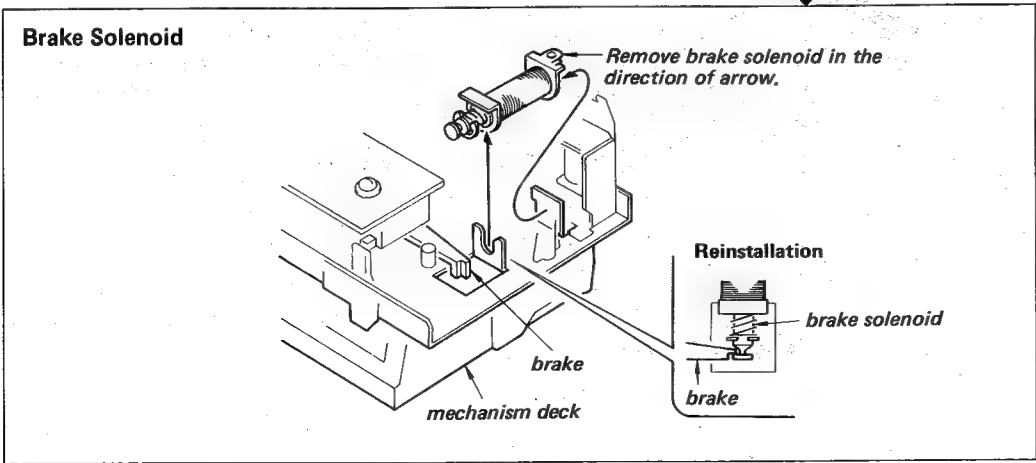
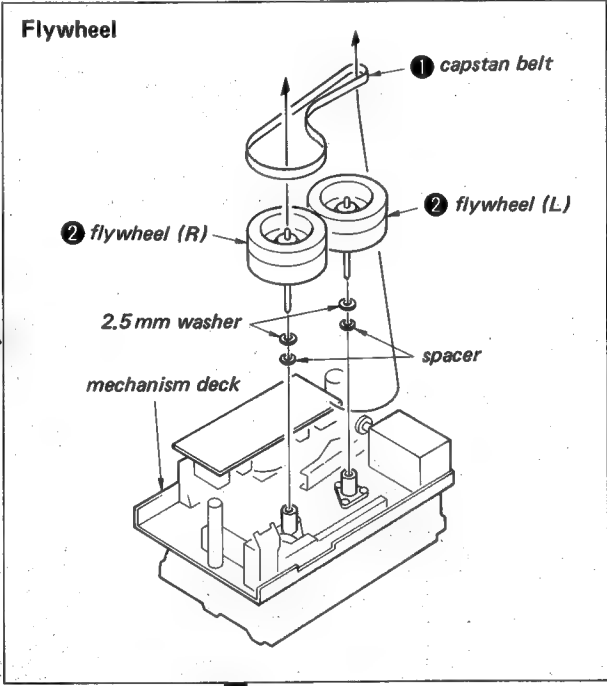
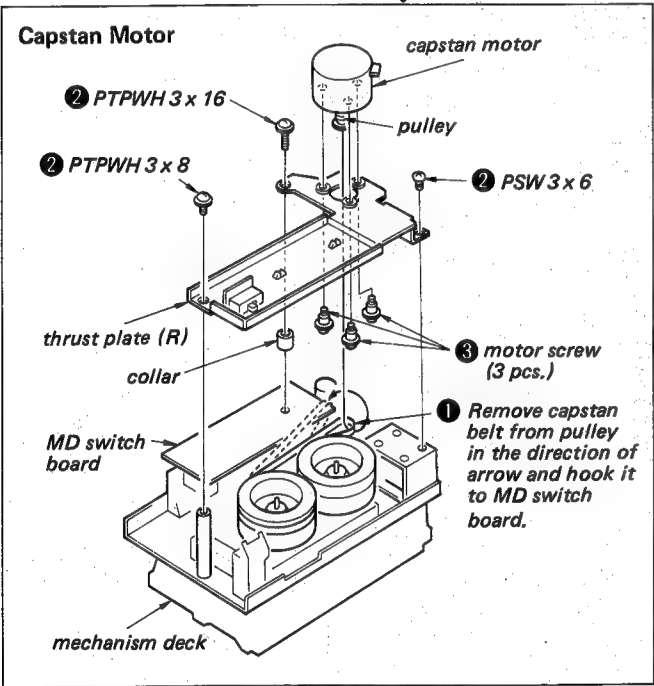
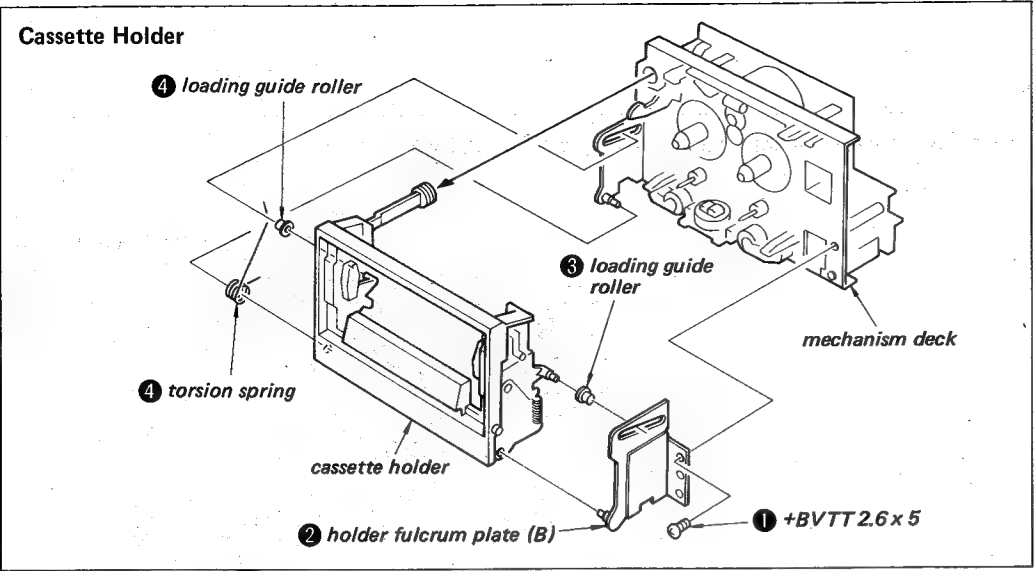
Cassette Window

- Push the EJECT button and pull up.



Front Panel/Escutcheon/Mechanism Deck/Display Board/Link Plate



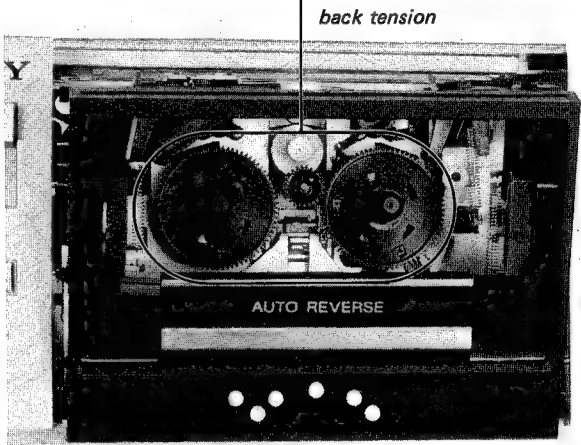


3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
record/playback head
erase head
capstan
pinch roller
rubber belts
idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque	Torque Meter	Meter Reading
FWD	CQ102C	30 – 60 g·cm (0.42 – 0.83 oz·inch)
FWD back tension	CQ102C	3.5 – 5.5 g·cm (0.04 – 0.09 oz·inch)
REV	CQ102RB	30 – 0.09 g·cm (0.42 – 0.83 oz·inch)
REV back tension	CQ102RB	3.5 – 5.5 g·cm (0.04 – 0.09 oz·inch)
FF·REW	CQ201B	110 – 175 g·cm (1.52 – 2.42 oz·inch)



Precaution on Repairing

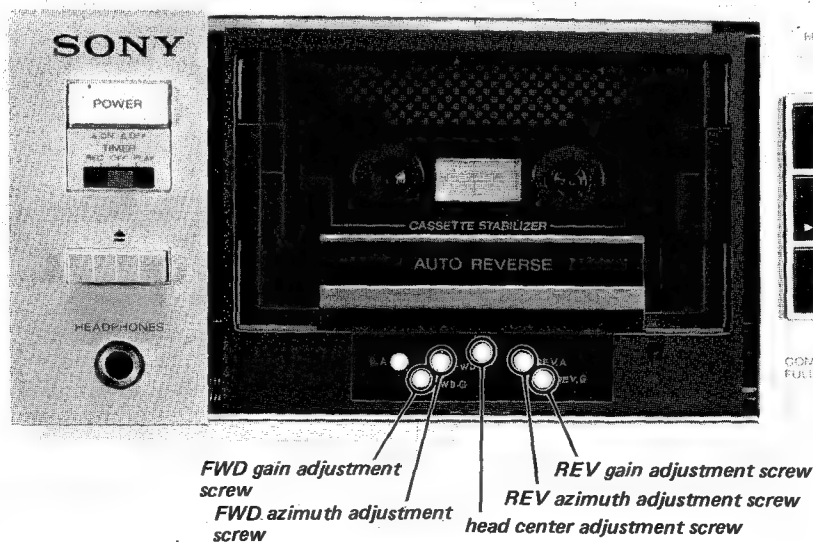
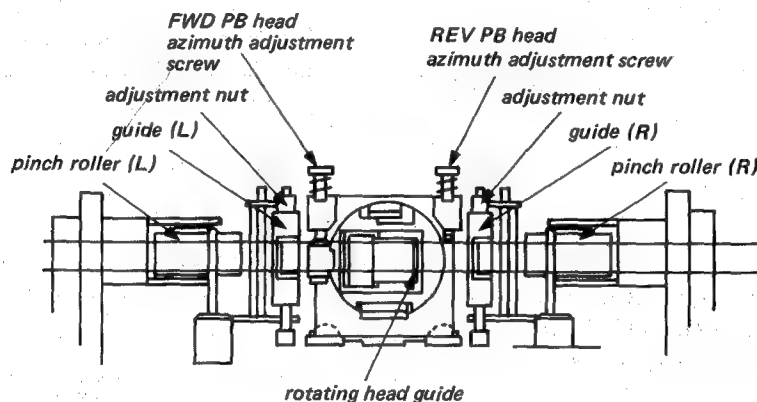
As the head center adjustment and the tape pass adjustment are affected each other, do not perform them at the same time.

Head Center Adjustment

1. Insert a mirror tape cassette.
2. Place the unit in play mode.
3. When the lower part of the tape is warped, loose the head center adjustment screw. Reversely, the upper part of the tape is warped, secure the adjustment screw.
4. Confirm the tape warp for both in the forward and reverse directions.

Tape Pass Adjustment

1. Clean the pinch roller and the record/playback head with soft cloth moistened with alcohol.
2. Play a test tape WS-48.
3. Adjust the FWD gain adjustment screw in the forward mode and the REV gain adjustment screw in the reverse mode so that the VTVM reads the maximum, and lissajous figure is in 30° angle reading on the oscilloscope across the LINE OUT.
4. Play a mirror tape cassette in the forward mode.
5. Confirm there is no tape curl near the guide of the head and the tape guide L. If there is tape curl, adjust the guide L. The turning amount of the guide L should be within 3/4 turns.



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE SELECT switch according to the tape as follows.

Tape	TAPE SELECT switch	LED display
CS-15	AUTO	I: NORM
CS-26	AUTO	II: CrO ₂
CS-30	Fe-Cr (METAL)	III: Fe-Cr
CS-40	AUTO Fe-Cr (METAL)	IV: METAL

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR OFF
 TAPE TYPE I
 TIMER OFF
 REC BALANCE \mathcal{G}_{ATT}^{ATT} (CENTER)
 LINEOUT/PHONE
 LEVEL \mathcal{G}_{ATT}^{ATT} (MAX)
 AUTO ATT OFF

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	MIC	LINE IN
source impedance	300 Ω	10k Ω
input level	0.77 mV (-60 dB)	0.25 V (-10 dB)

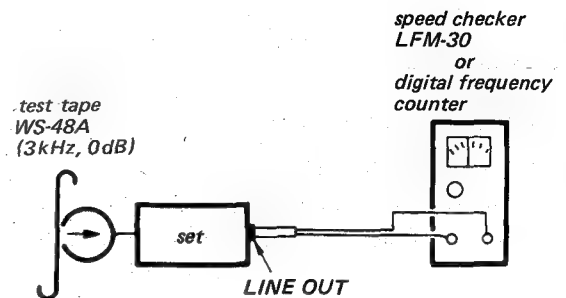
Standard output Level

	HEADPHONES	LINE OUT
load impedance	8 Ω	47k Ω
output level	31 mV (-26 dB)	0.435 V (-5 dB)

Tape Speed Adjustment

Procedure:

Mode: forward playback



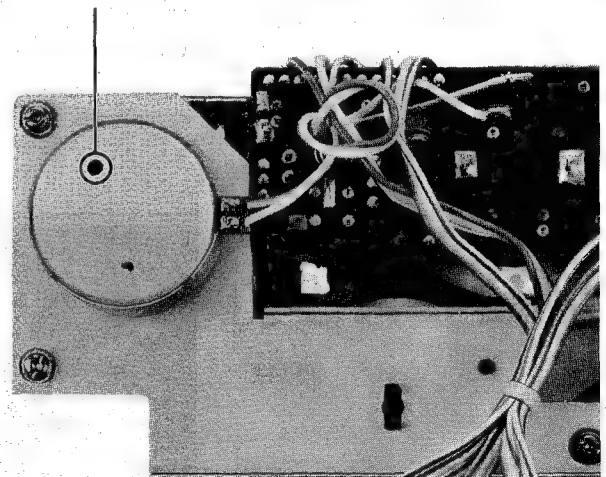
Specification:

Speed checker	Digital frequency counter
-0.66 ~ -0.33%	2,980 - 2,990 Hz

Frequency difference between the beginning and the end of the tape should be within 0.84% (25 Hz).

Adjustment Location:

Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.



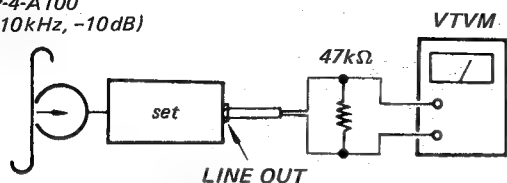
Record/playback Head Azimuth Adjustment

Note: (Perform for both in forward and reverse directions.)

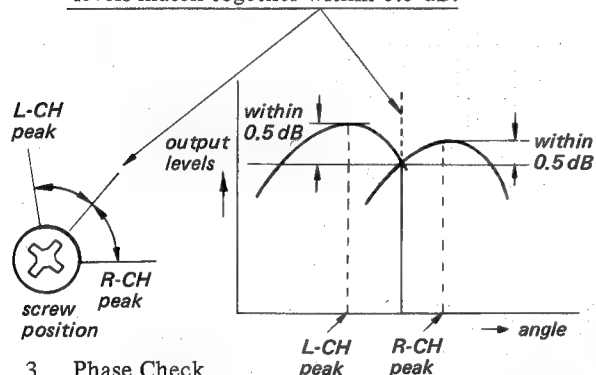
Procedure:

1. Mode: playback

test tape
P-4-A100
(10 kHz, -10 dB)

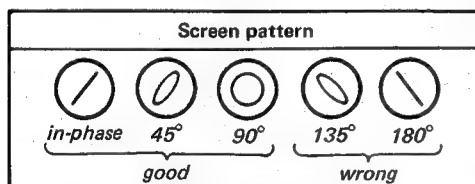
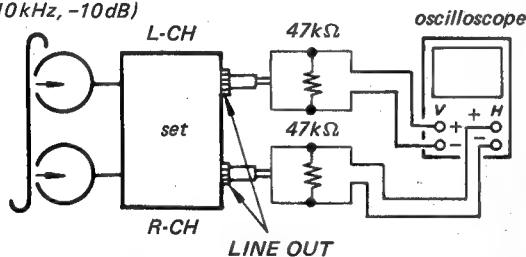


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

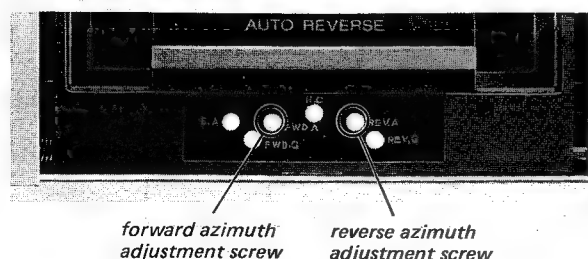


3. Phase Check
Mode: playback

test tape
P-4-A100
(10 kHz, -10 dB)



Adjustment Location:

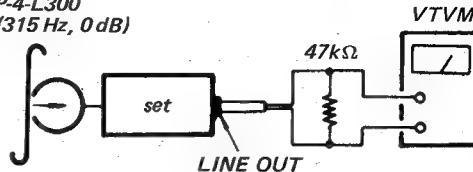


Playback Level Adjustment

Procedure:

Mode: playback

test tape
P-4-L300
(315 Hz, 0 dB)



Specification:

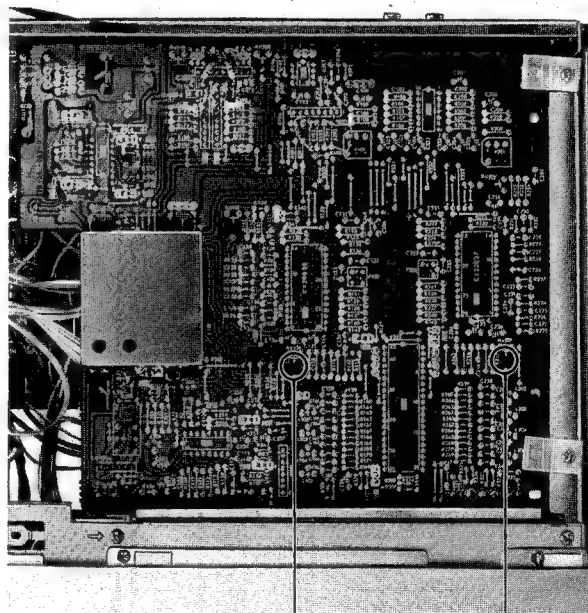
LINE OUT level: 0.41 – 0.46 V
(-5.5 – -4.5 dB)

Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location:

— audio board —



RV101
(L-CH)

RV201
(R-CH)

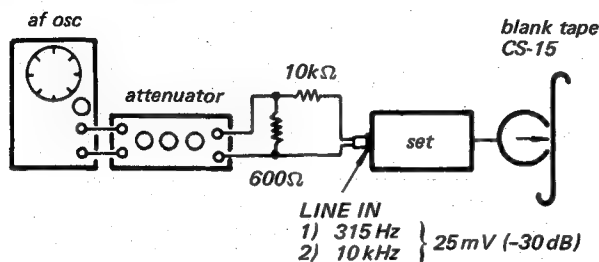
Record Bias Adjustment

Setting:

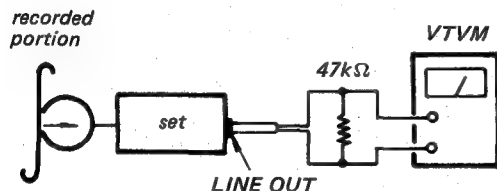
REC LEVEL control: standard record
(See page 28)

Procedure:

1. Mode: record



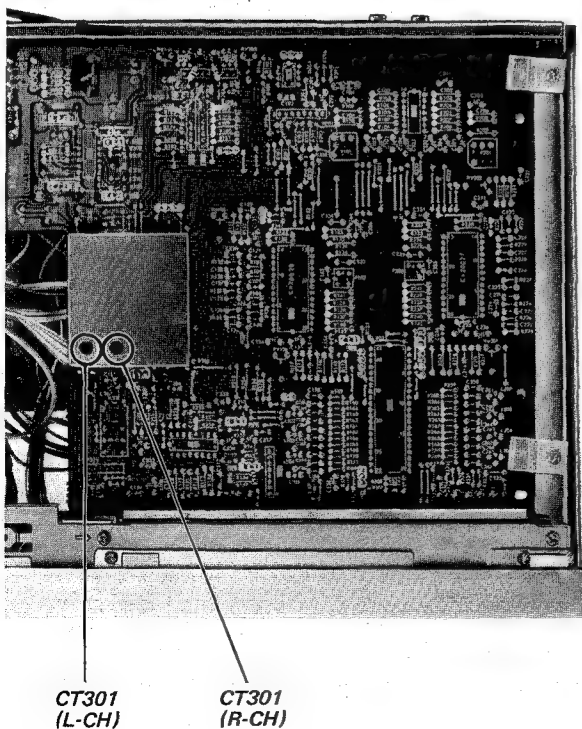
2. Mode: playback



Adjust CT301 so that the LINE OUT level of 10 kHz signal is 0 dB relative to that of 1 kHz.

Adjustment Location:

— audio board —



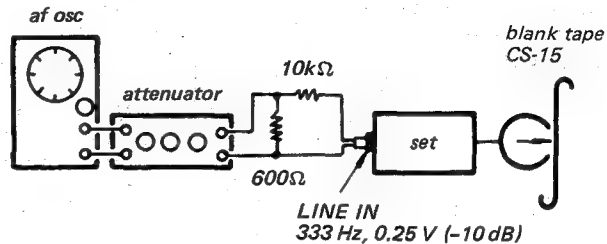
Record Level Adjustment

Setting:

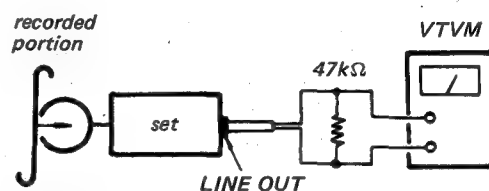
REC LEVEL control: standard record
(See page 28)

Procedure:

1. Mode: record



2. Mode: playback



Specification:

LINE OUT level: CS-15; 0.41 – 0.46 V
(-5.5 – -4.5 dB)

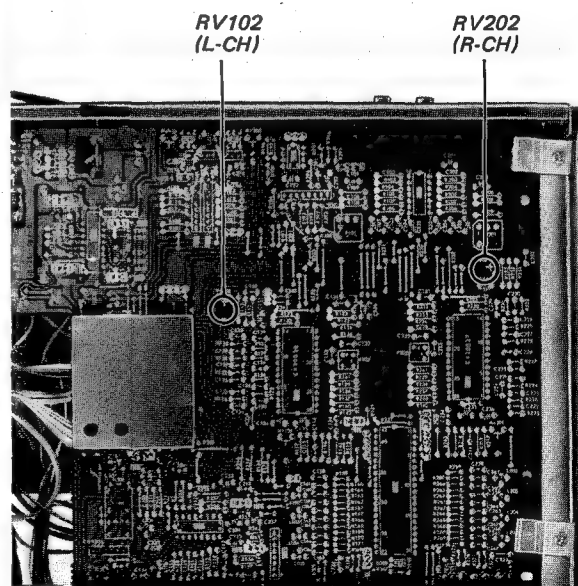
CS-26; } 0.39 – 0.49 V

CS-30; } (-6 – -4 dB)

CS-42; }

Adjustment Location:

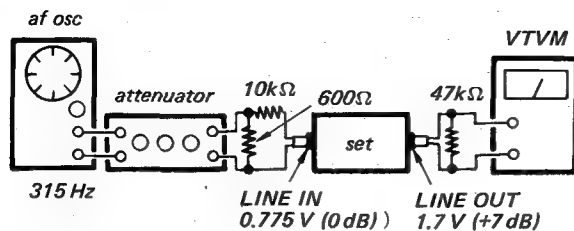
— audio board —



Level Meter Calibration

Procedure:

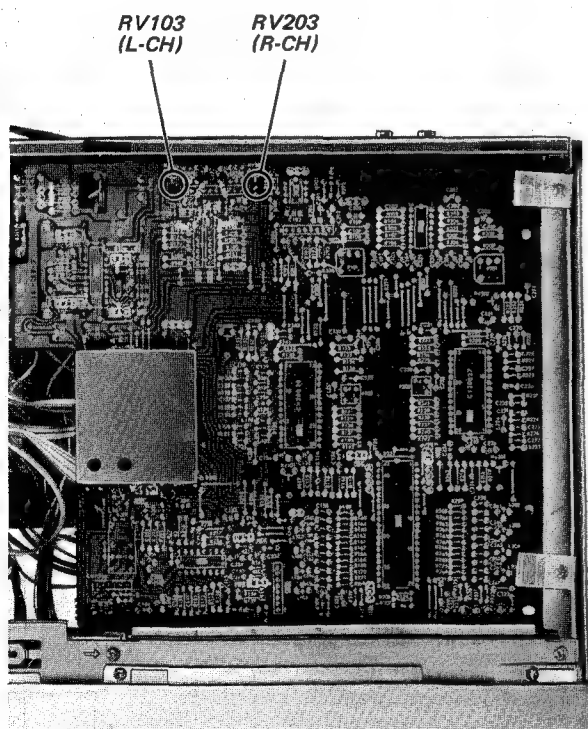
1. Mode: record



2. Set the REC LEVEL control so that the LINE OUT level is 1.7 V (+7 dB).
3. Adjust RV103 (L-CH) and RV203 (R-CH) so that all the segment of the LED meter go on.
4. Make sure that the LED meter indicates -4 dB (0 VU) when VTVM reads -5 dB (0.44 V).

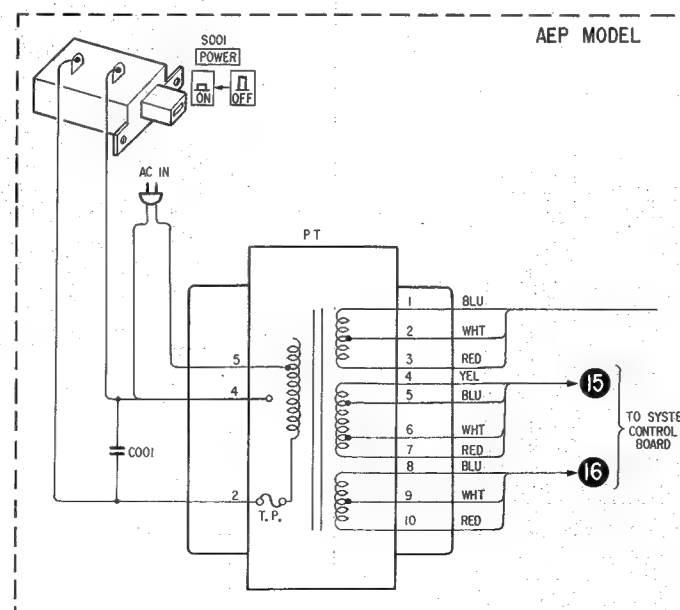
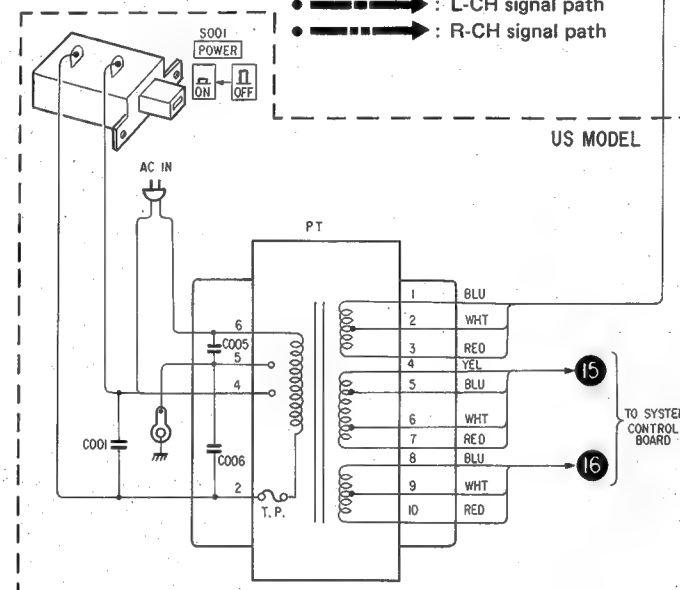
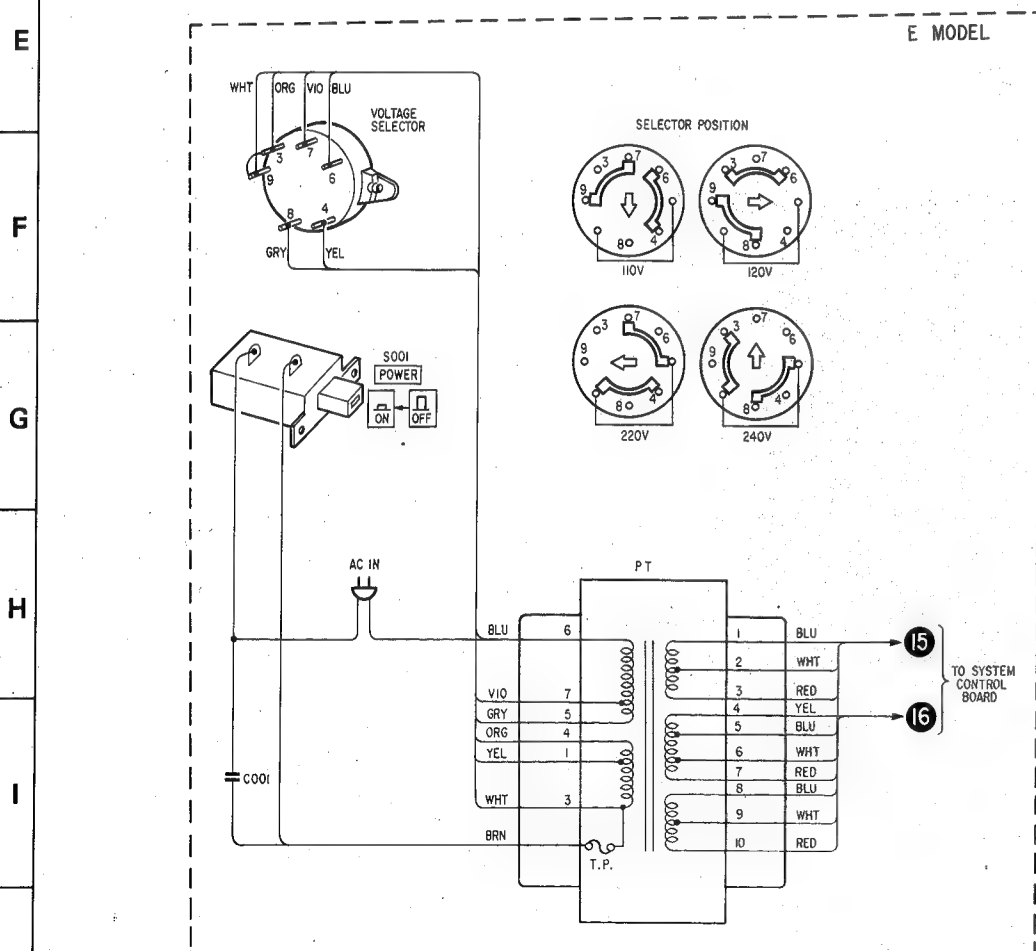
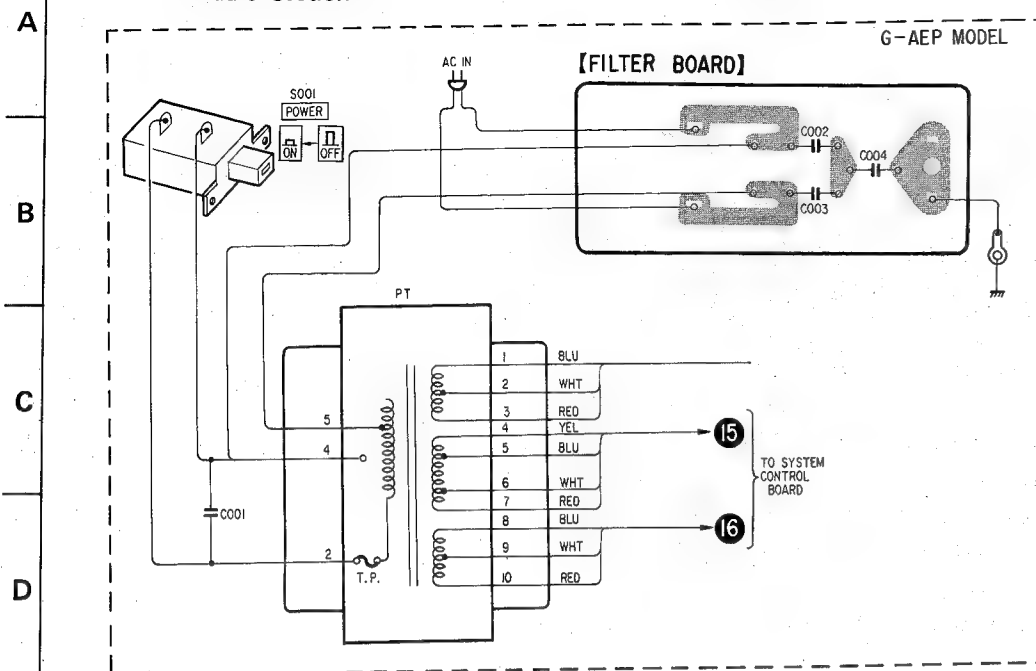
Adjustment Location:

— audio board —

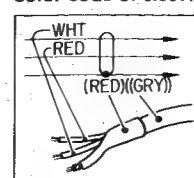


- See page 39 for Semiconductor Lead Layouts.

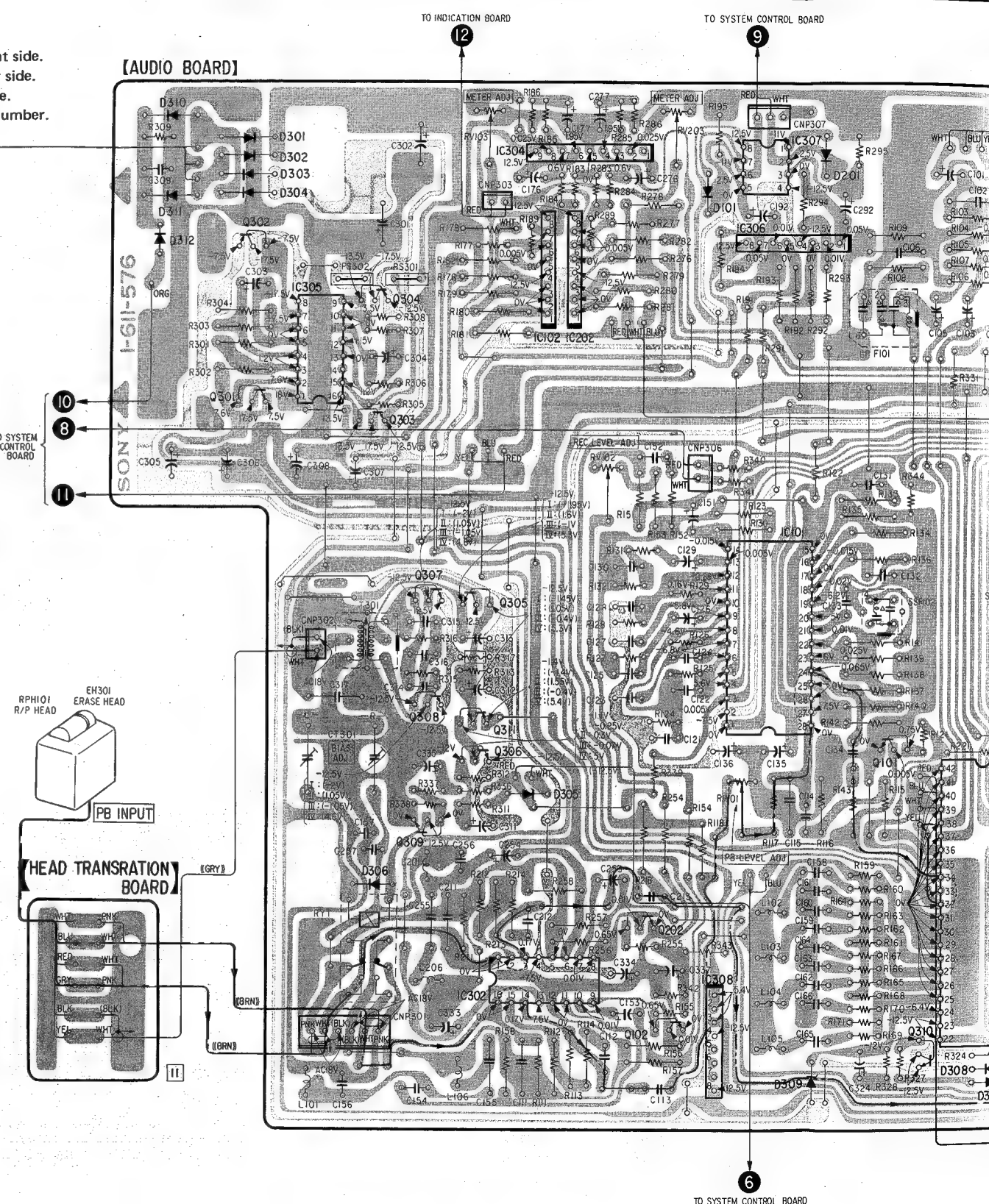
– Audio Section –



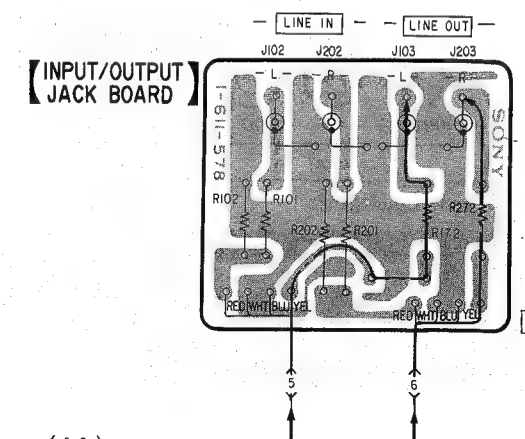
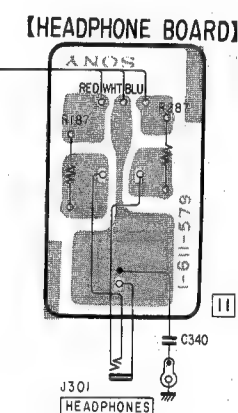
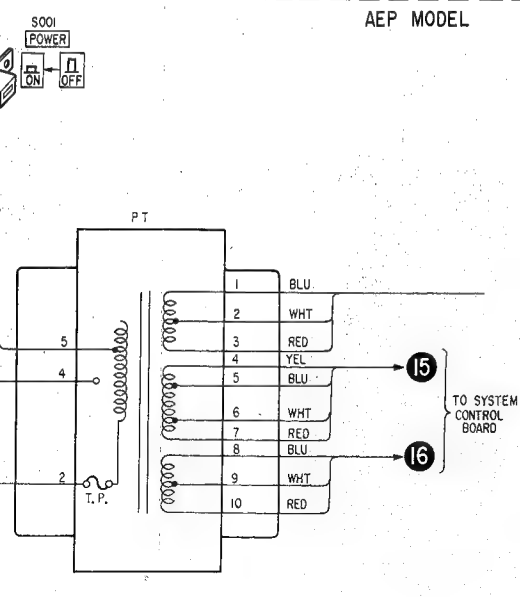
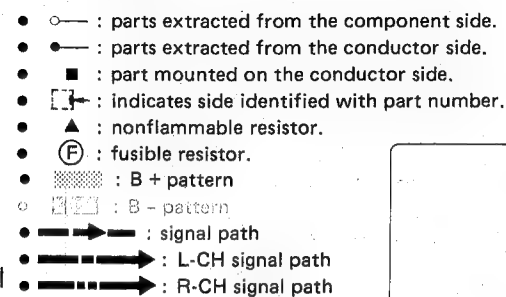
- Color code of sleeving over the end of the jacket.



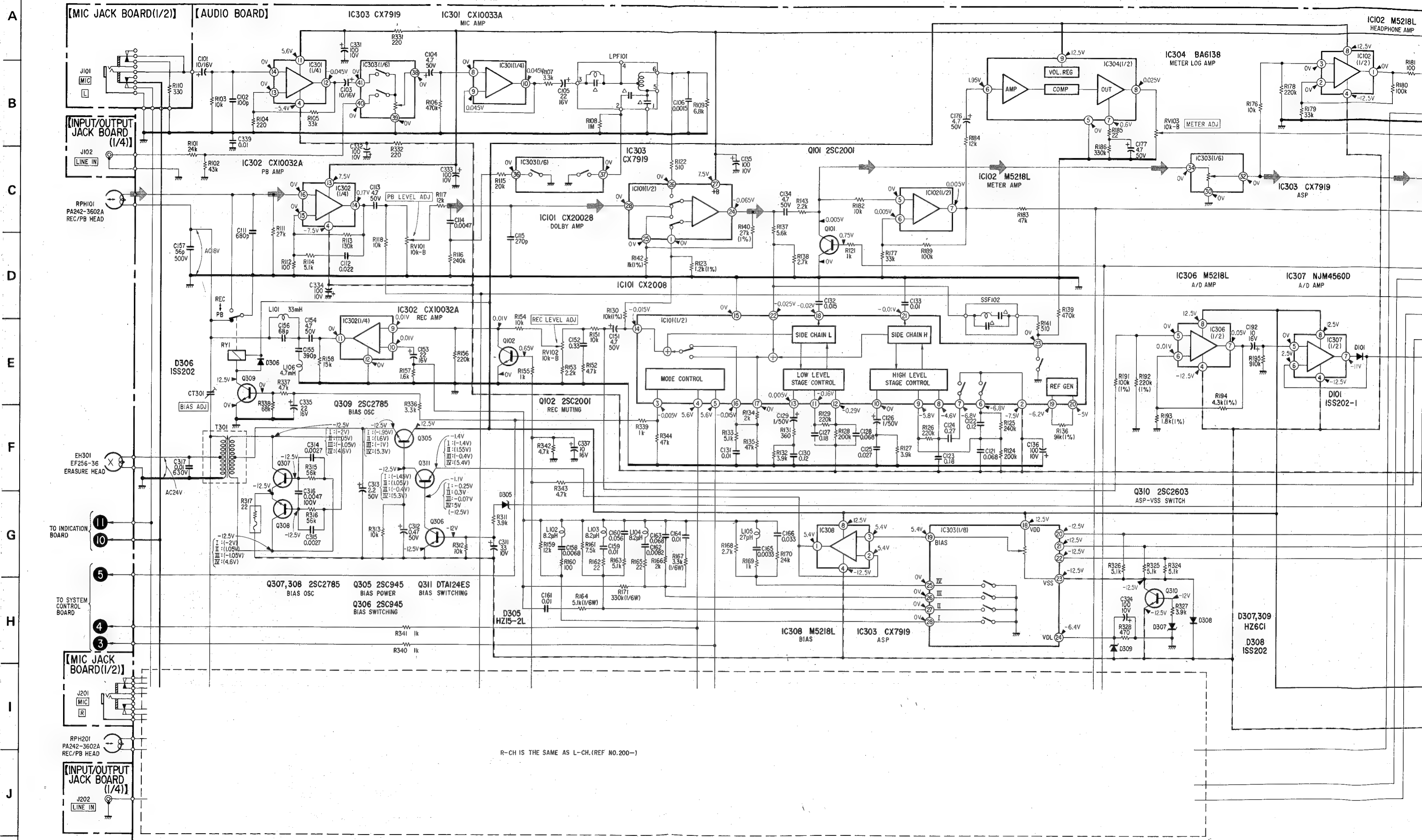
- ○ — : parts extracted from the component side.
- ● — : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- □ : indicates side identified with part number.
- ▲ : nonflammable resistor.
- ⊕ : fusible resistor.
- ▨ : B + pattern
- ▩ : B - pattern
- —→ : signal path
- —→ : L-CH signal path
- —→ : R-CH signal path

[illegible]

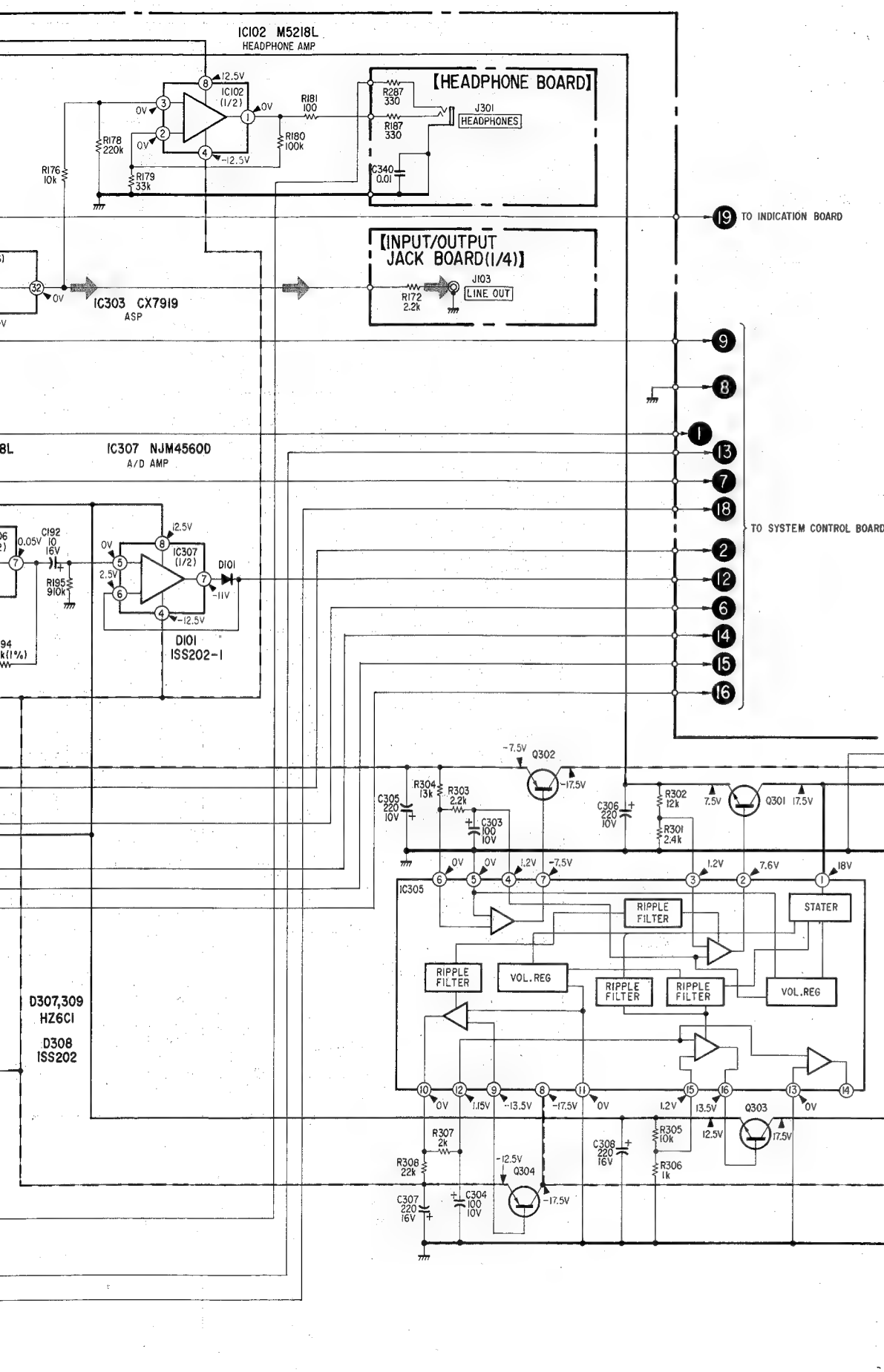
- Color code of sleeving over the end of the jacket.



4-2. SCHEMATIC DIAGRAM - Audio Section -



R-CH IS THE SAME AS L-CH.(REF NO.200-1)



- Note:**
- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
 - All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted.
 $\text{k}\Omega$: 1000 Ω , $\text{M}\Omega$: 1000 $\text{k}\Omega$
 - \blacktriangle : nonflammable resistor.
 - $\textcircled{\text{F}}$: fusible resistor.
 - \triangle : internal component.
 - \square : panel designation.
 - \square : adjustment for repair.
 - --- : B+ bus.
 - --- : B- bus.
 - Voltages are dc with respect to ground unless otherwise noted.

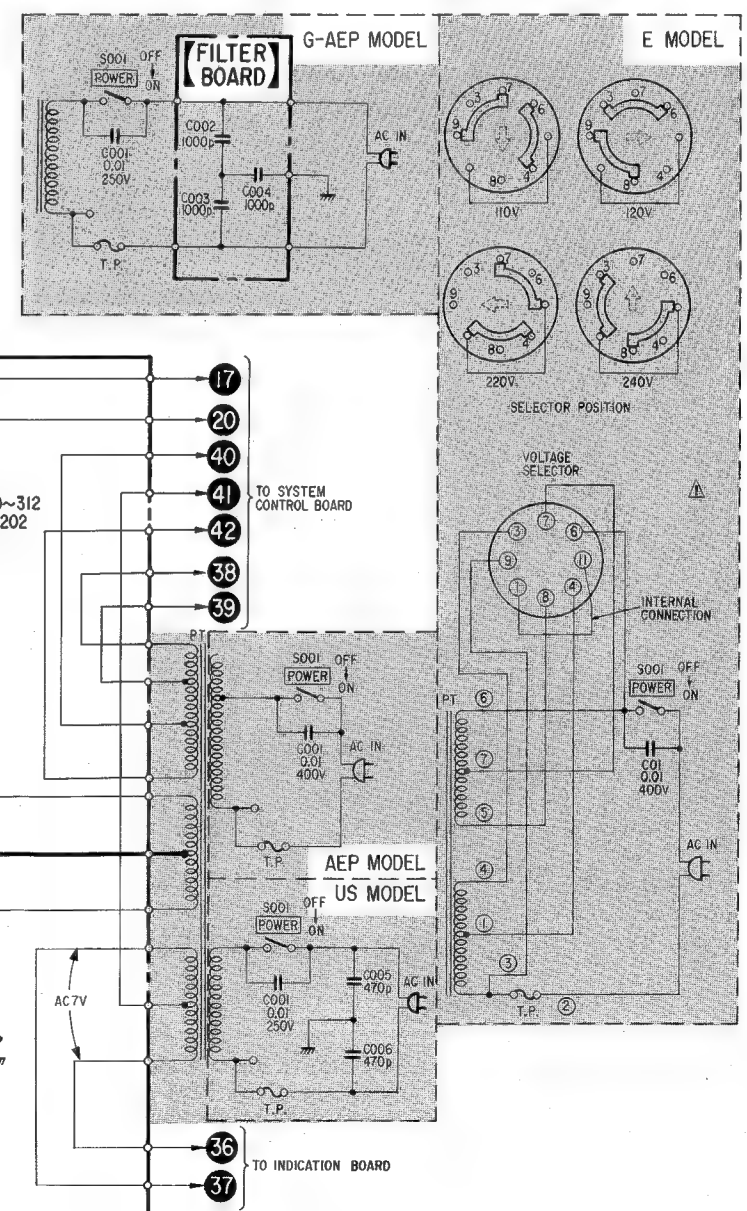
- Readings are taken under no-signal conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
NO MARK: STOP
() : REC I: NORMAL III: Fe-Cr
II: CrO_2 IV: METAL
- Voltage variations may be noted due to normal production tolerances.
- AC voltage readings in the bias oscillator with a VTVM.
- \rightarrow : signal path

Note: Voltages are measured with a VOM (50k Ω /V).

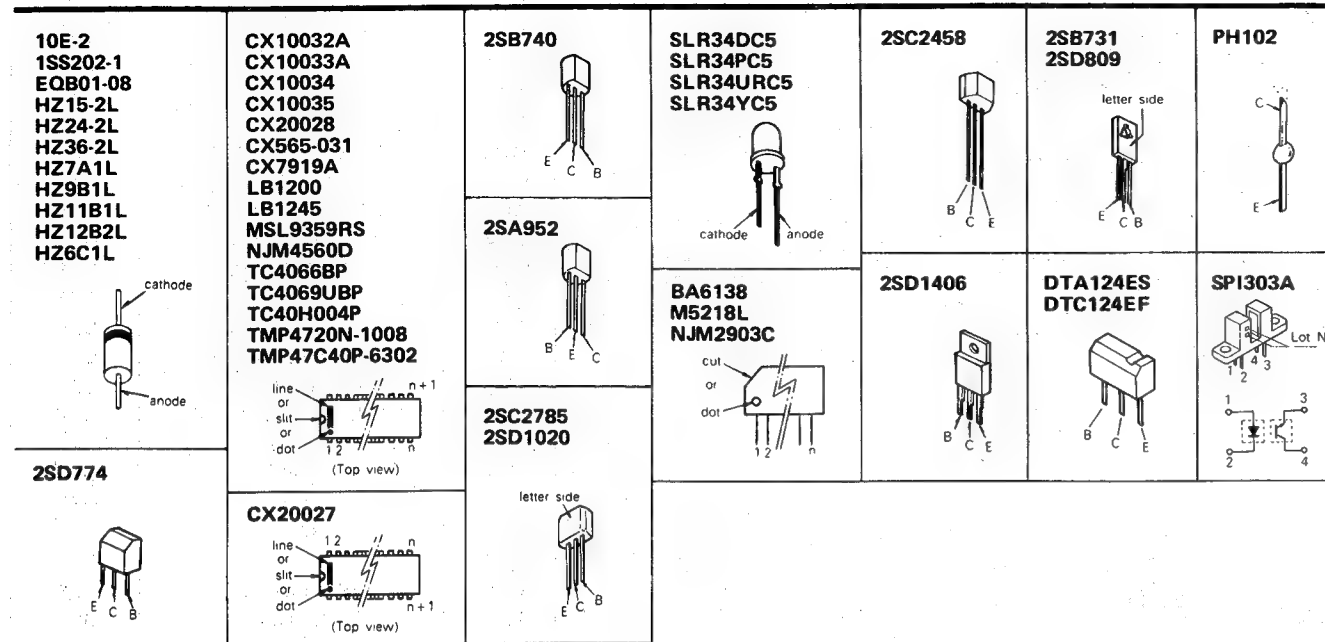
Note: The components identified by shading and mark \blacktriangle are critical for safety. Replace only with part number specified.

• Switches

Ref. No.	Switch	Position
S001	POWER	OFF
S601	TIMER	OFF
S701		OFF
S702		OFF
S703		OFF
S704	QUICK	OFF
S802		OFF
S803	TAPE OPERATION	OFF
S804	AUTO III	III
S805	REC BALANCE L	OFF
S806	DOLBY NR	OFF
S807	AUTO FADER	OFF
S808		OFF
S809		OFF
S810	PROGRAM	OFF
S811	WRITE	OFF
S812	REC BALANCE R	OFF
S813	AUTO ATT	OFF
S814		OFF
S815		OFF
S816	RESET	OFF
S817		OFF
S818	REC LEVEL -	OFF
S819	LINE OUT -	OFF
S820		OFF
S821		OFF
S822	FUNCTION MEMORY	OFF
S823		OFF
S824	REC LEVEL +	OFF
S825	LINE OUT +	OFF
S901		OFF
S1001	FWD PAWL	W/O
S1002	REC BIAS	70 μ
S1003	TAPE SELECT	METAL
S1004	REV PAWL	W/O
S1005	CASSETTE HALF	W/O
S1006	DIR	REV



● Semiconductor Lead Layouts



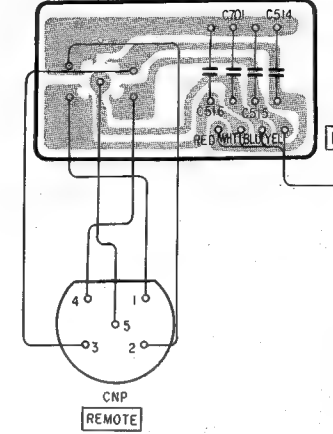
4-3. MOUNTING DIAGRAM

— System Control Section —

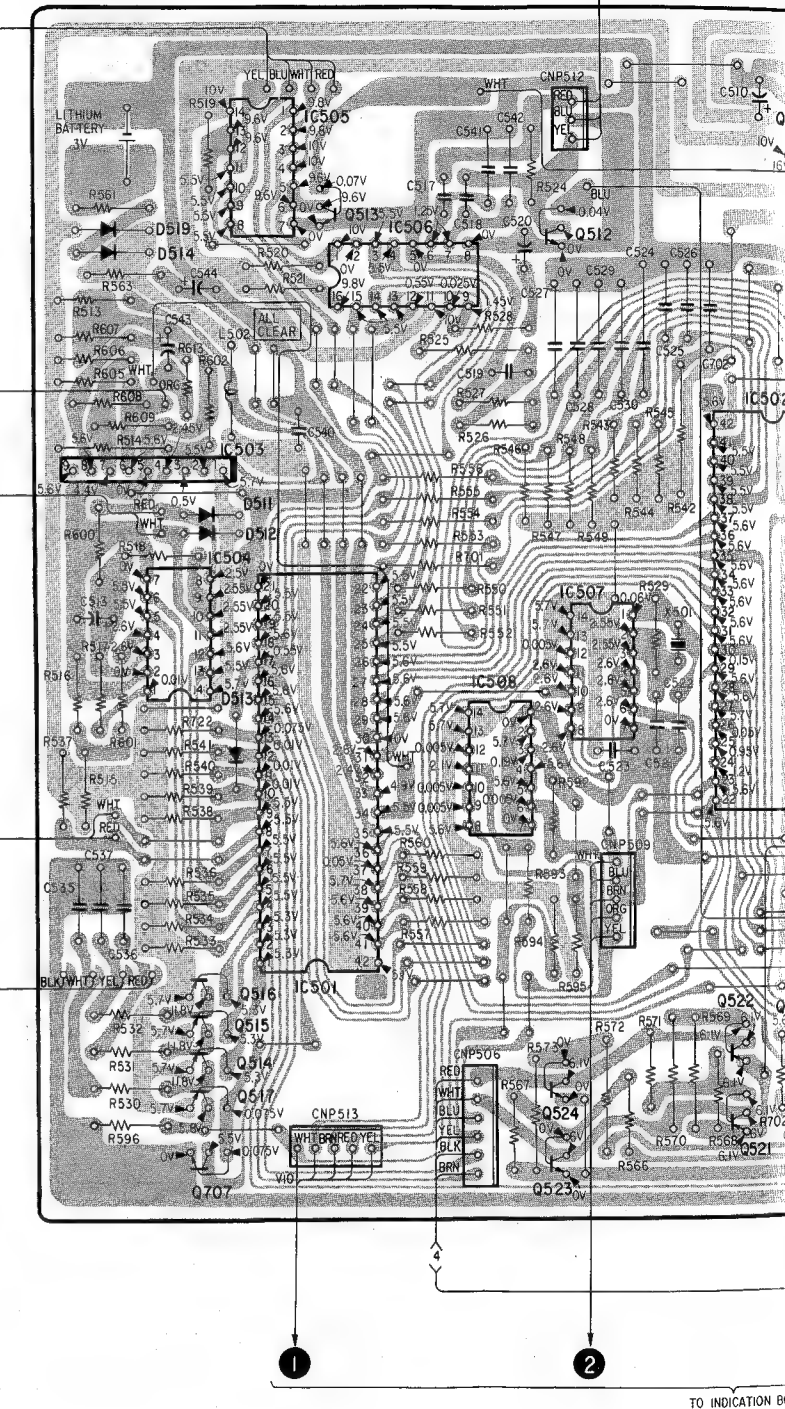
- See page 39 for Semiconductor Lead Layouts.
- See page 33 for Note.

Q IC	516, 517, IC505		513, IC506		512		522, IC502	
	IC503, 515	IC504	514	707, IC501	IC508	524	IC507	521
D	519	511	512	513				

[REMOCON SOCKET BOARD]

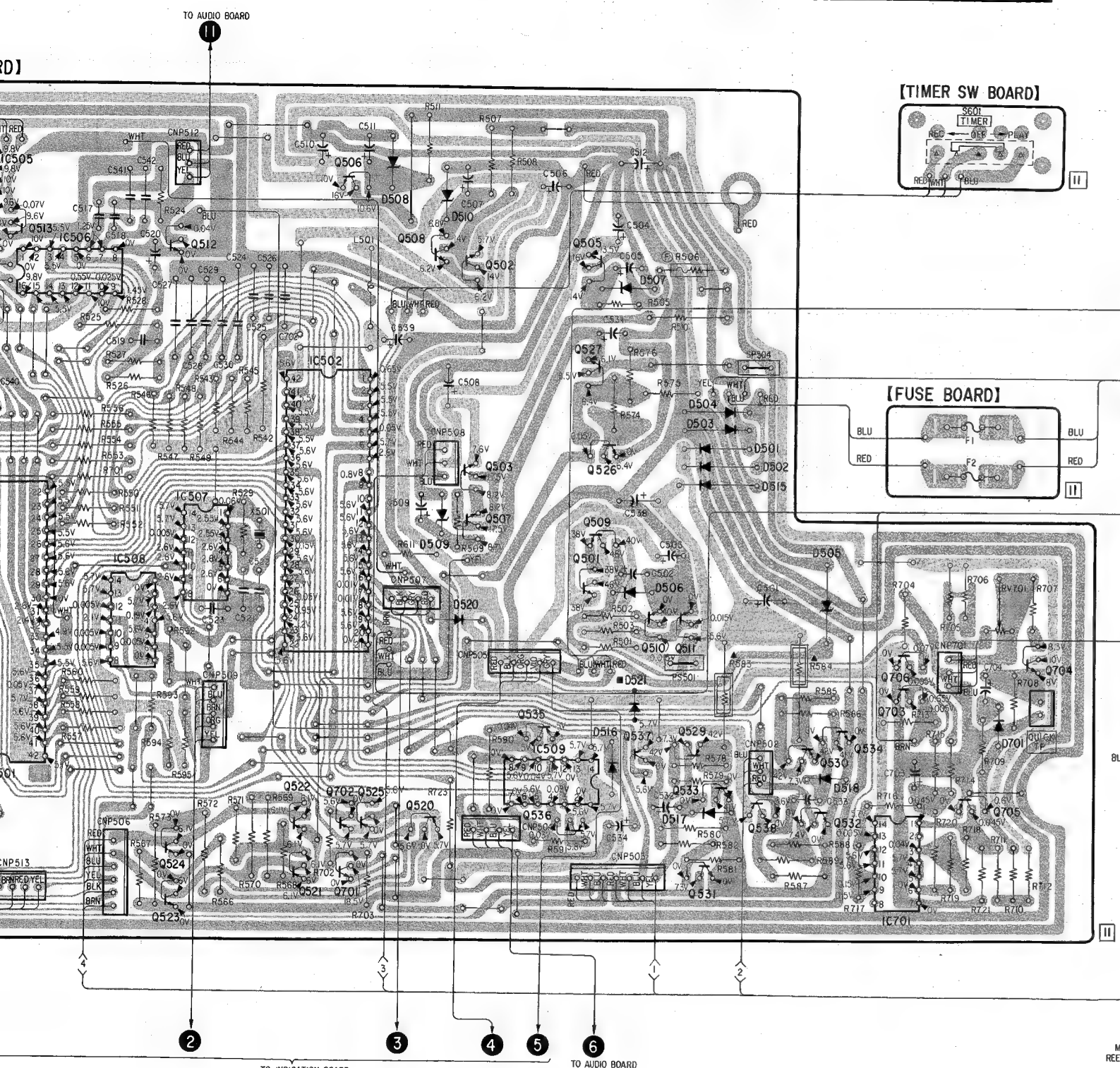


[SYSTEM CONTROL BOARD]

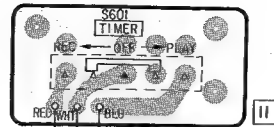


7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----

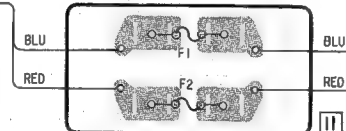
513, IC506	512 524 523	IC507	522, IC502, 702, 525 521	506 701	508 520	502 503 507	505 527, 509 526, 501	510, 511 529, 533, 531	534 538, 530, 532	706 703 IC701	705	704
					508 510 509 520		506 516	504 503, 502 501, 515	505 518			



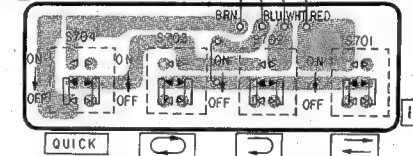
[TIMER SW BOARD]



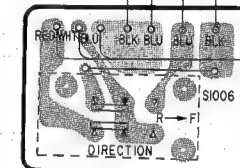
[FUSE BOARD]



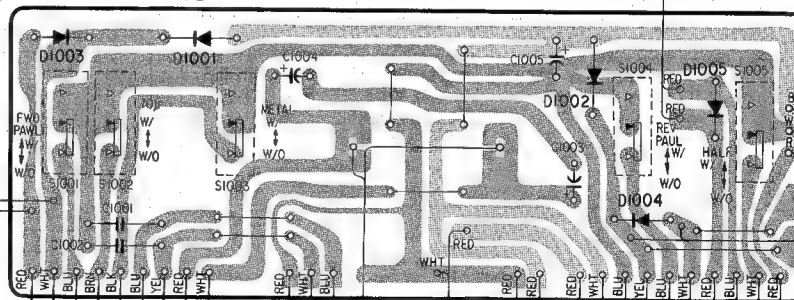
[DIRECTION (REW) MODE SW BOARD]



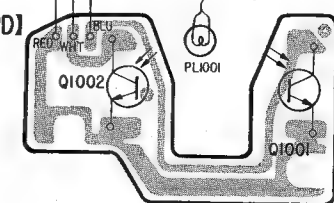
[DIR SW BOARD]



[MD SW BOARD]



[PHOTO BOARD]



Q	1002	1001	1002	1004	1005
D	1003	1001	1002	1004	1005



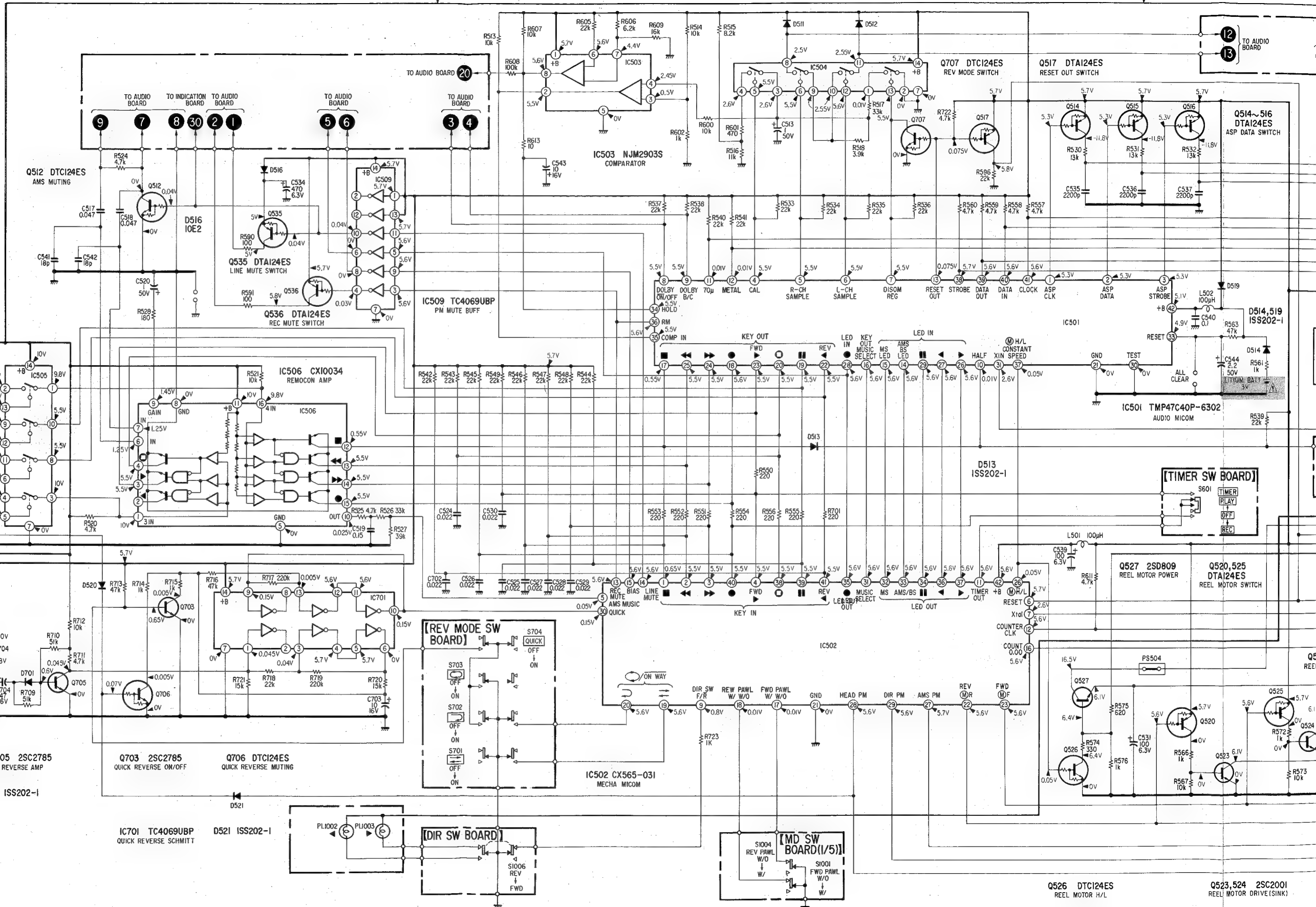
PM1003 (DIR) PLANGER SOLENOID

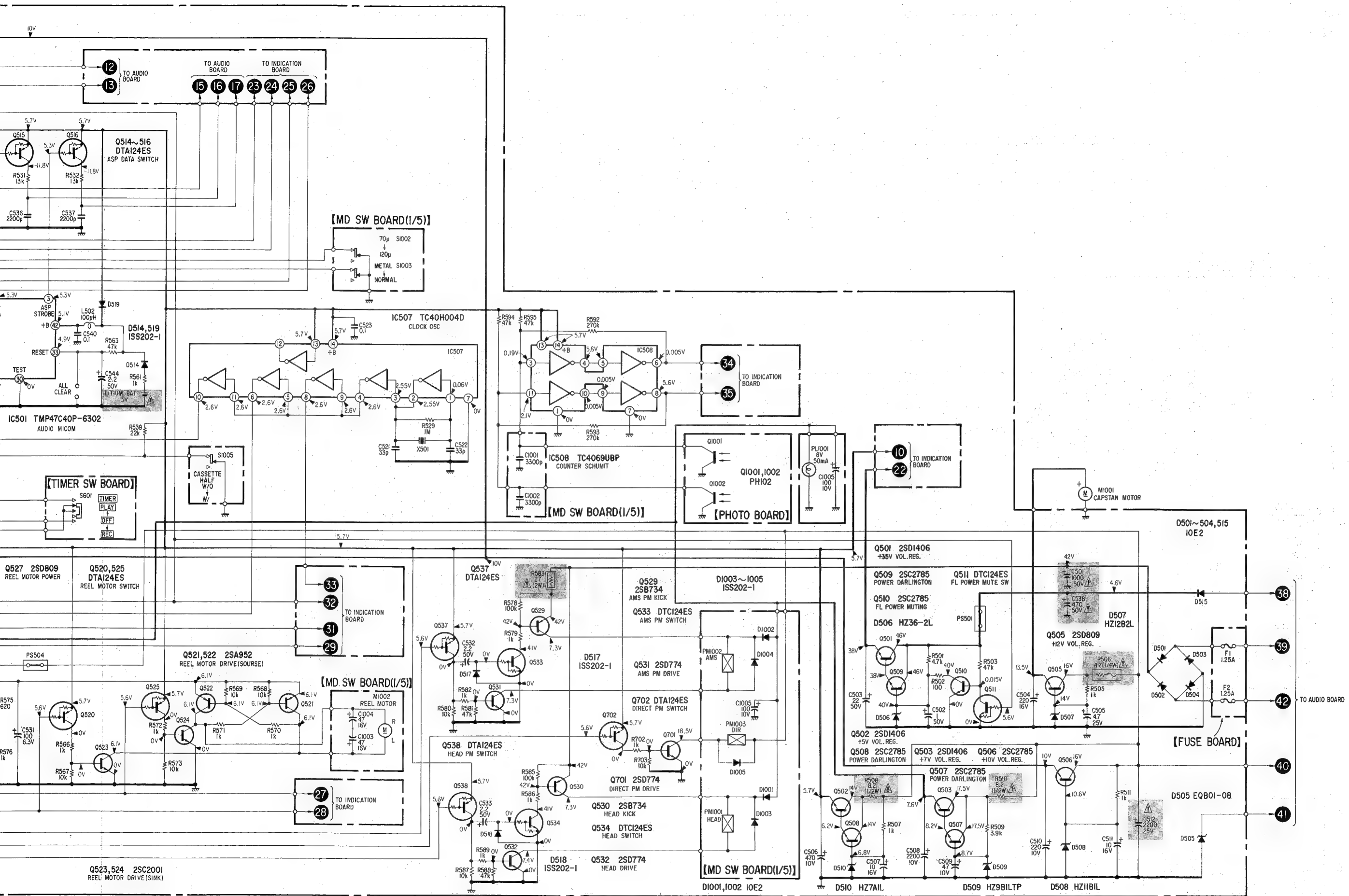
PM1002 (AMS) PLANGER SOLENOID

M1002 REEL MOTOR

M1001 CAPSTAN MOTOR

A
B
C
D
E
F
G
H
I
J





– Indicator Section –

-

[illegible]

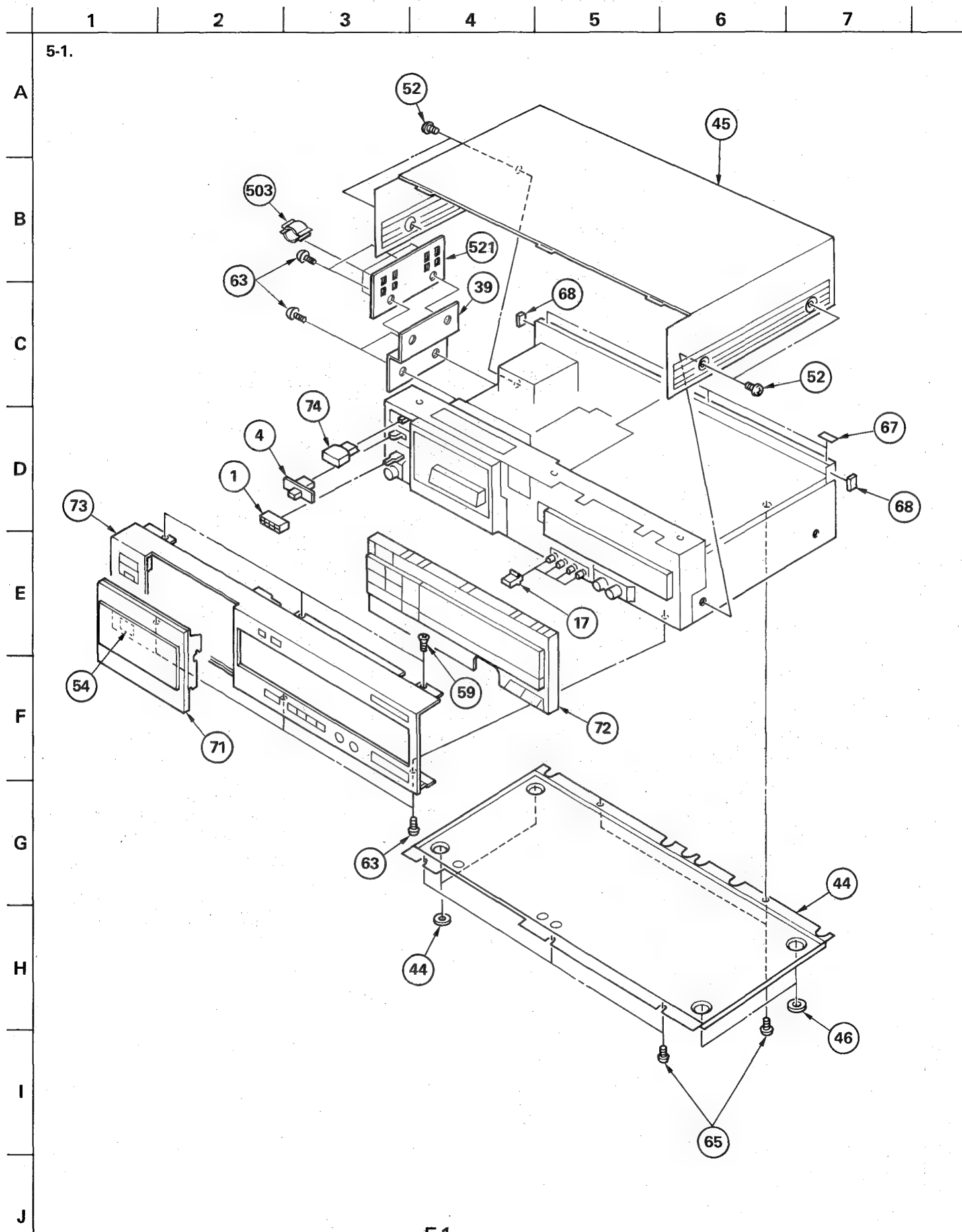
—

- See page

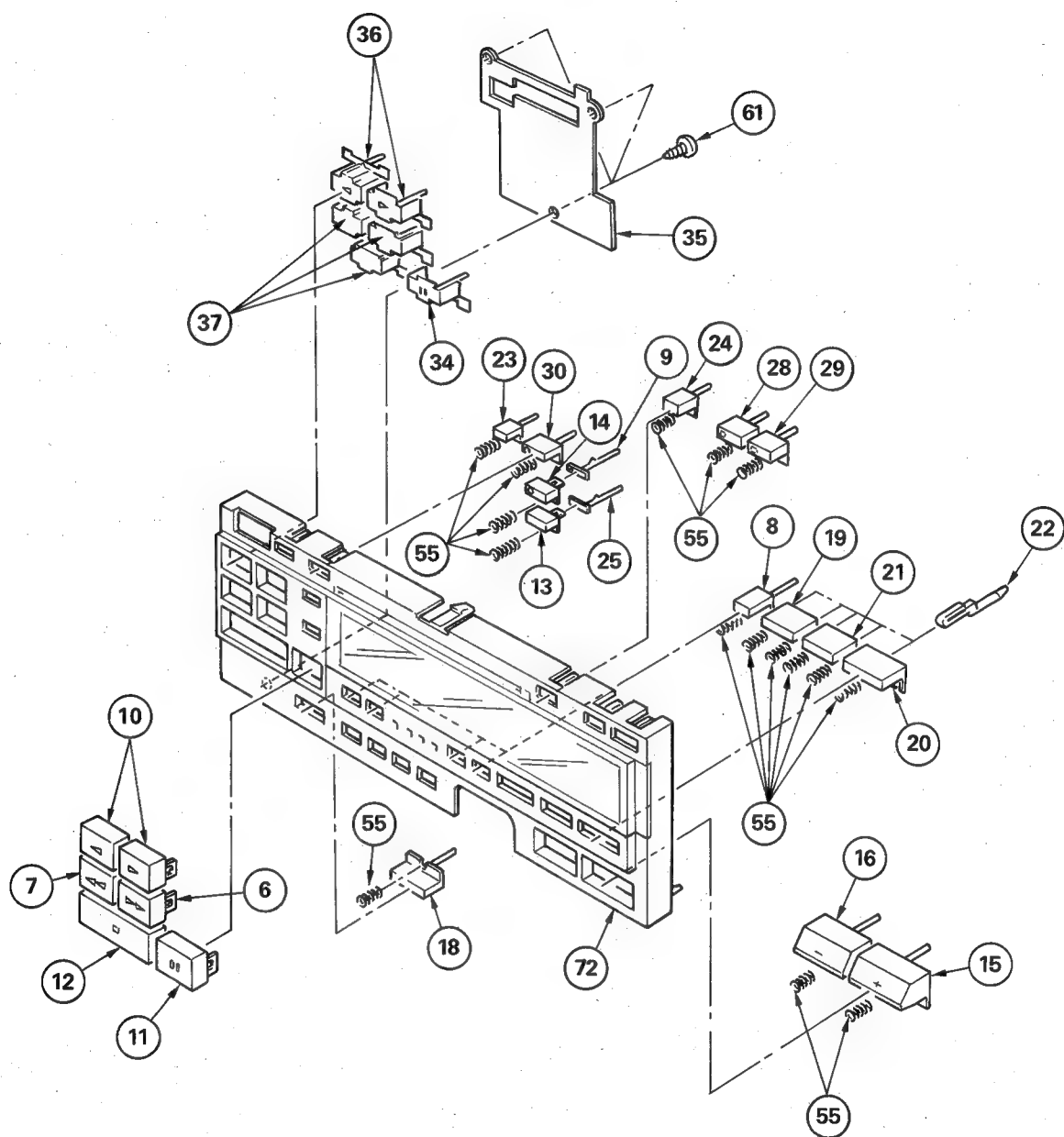
- See pages 37, 38 for Note.

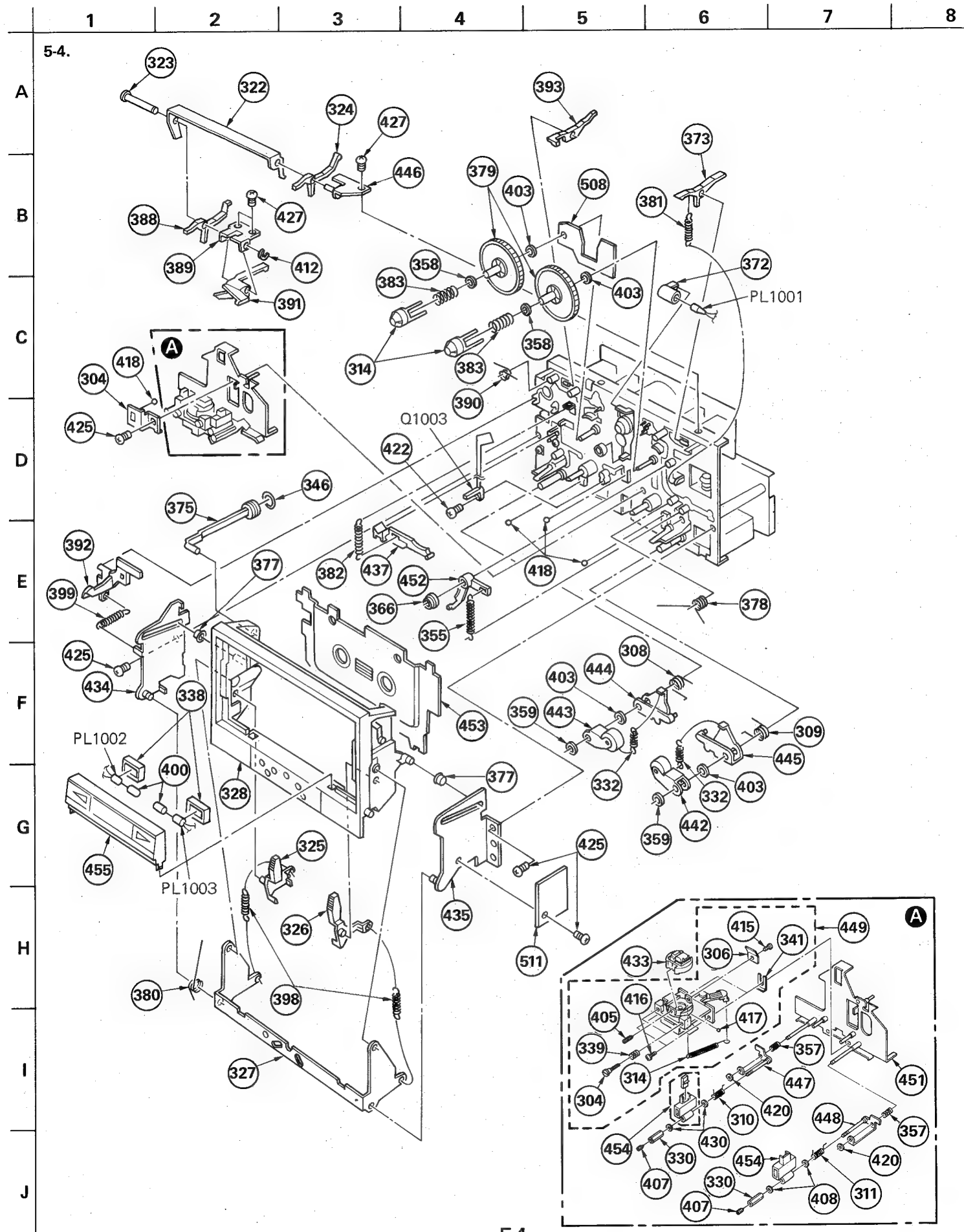


SECTION 5
EXPLODED VIEWS AND PARTS LIST



5-2.





GENERAL SECTION

No.	Part No.	Description
1	3-304-419-00	(SILVER)...BUTTON, EJECT
1	3-304-419-31	(BLACK)...BUTTON, EJECT
2	3-304-423-00	PLATE, SIDE, LEFT
3	3-304-944-00	PLATE, SIDE, RIGHT
4	3-307-538-21	(BLACK)...KNOB, SWITCH, TIMER
4	3-307-538-51	(SILVER)...KNOB, SWITCH, TIMER
5	3-315-156-00	SPACER, REMOTE CONTROL
6	3-317-101-01	BUTTON, REW-FF
7	3-317-101-11	BUTTON, REW-FF
8	3-317-102-00	BUTTON (A), SQUARE
9	3-317-103-00	MOLD, RECORD BUTTON
10	3-317-104-00	BUTTON, REV-FWD
11	3-317-105-00	BUTTON, PAUSE
12	3-317-106-00	BUTTON, STOP
13	3-317-107-00	BUTTON, RECORD MUTE
14	3-317-108-00	BUTTON, RECORD
15	3-317-110-00	(SILVER)...BUTTON (+), RECORD LEVEL
15	3-317-110-11	(BLACK)...BUTTON (+), RECORD LEVEL
16	3-317-111-00	(SILVER)...BUTTON (-), RECORD LEVEL
16	3-317-111-11	(BLACK)...BUTTON (-), RECORD LEVEL
17	3-317-112-00	(SILVER)...KNOB, REVERSE MODE
17	3-317-112-11	(BLACK)...KNOB, REVERSE MODE
18	3-317-113-00	KNOB (A), SQUARE
19	3-317-114-01	KNOB (B), SQUARE
20	3-317-114-11	KNOB (B), SQUARE
21	3-317-114-21	KNOB (B), SQUARE
22	3-317-116-00	MOLD, CONTROL BUTTON
23	3-317-117-01	(SILVER)...BUTTON (B), SQUARE
23	3-317-117-21	(BLACK)...BUTTON (B), SQUARE
24	3-317-117-11	BUTTON (B), SQUARE
25	3-317-120-00	MOLD, RECORD MUTE BUTTON
26	3-317-121-00	SLIDER, EJECT
27	3-317-123-00	PLATE, RELAY
28	3-317-125-01	BUTTON, TRANSLUCENT
29	3-317-125-11	BUTTON, TRANSLUCENT
30	3-317-125-21	(SILVER)...BUTTON, TRANSLUCENT
30	3-317-125-31	(BLACK)...BUTTON, TRANSLUCENT
31	3-317-129-11	(AEP).....PLATE, JACK
31	3-317-129-21	(US).....PLATE, JACK
31	3-317-129-31	(E2/3).....PLATE, JACK
31	3-317-162-01	(G-AEP).....PLATE, JACK
32	3-317-130-00	JOINT
33	3-317-133-00	CHASSIS, AMPLIFIER
34	3-317-135-00	MOLD, PAUSE BUTTON

GENERAL SECTION

No.	Part No.	Description
35	3-317-136-00	GUIDE, CONTROL BUTTON
36	3-317-137-00	MOLD, FWD BUTTON
37	3-317-138-00	MOLD, STOP BUTTON
38	3-317-148-01	(E2/3).....LABEL, MODEL NUMBER
38	3-317-150-01	(US).....LABEL, MODEL NUMBER
38	3-317-154-01	(AEP).....LABEL, MODEL NUMBER
38	3-317-160-01	(G-AEP).....LABEL, MODEL NUMBER
39	3-317-156-01	BRACKET, FUSE
40	3-317-157-01	INSTRUCTIONS
41	3-534-238-XX	SPRING, TENSION
42	3-575-502-00	BRACKET, EJECT
43	3-575-524-00	(US,AEP)...COVER, POWER SWITCH
44	3-575-538-11	PLATE, BOTTOM
45	3-575-539-00	(SILVER)...COVER, TOP
45	3-575-539-41	(BLACK)...COVER, TOP
46	3-576-731-00	FELT (H)
47	3-701-030-00	LABEL, SERIAL NUMBER
48	3-701-437-21	WASHER
49	3-701-682-00	(US,E2/3).....STOPPER, CORD
49	3-703-244-00	(AEP,G-AEP)...BUSHING, CORD
50	3-703-044-26	(US).....LABEL, CAUTION
51	3-703-249-01	SCREW, S TIGHT, +PTWH 3X6
52	4-889-321-01	SCREW
53	3-703-473-00	SCREW, TERMINAL
54	3-703-710-01	STICKER, SONY SYMBOL (12)
55	4-864-435-00	SPRING, COMPRESSION
56	4-875-455-01	(AEP,G-AEP)...COVER (DIA,20) CAPACITOR
56	4-875-455-21	(E2/3).....COVER (DIA,20) CAPACITOR
57	7-621-775-10	SCREW +B 2.6X4
58	7-623-210-22	SW 4, TYPE 2
59	7-682-247-04	SCREW +K 3X6
60	7-682-647-01	SCREW +PS 3X6
61	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
62	7-685-870-01	SCREW +BVTT 3X5 (S)
63	7-685-871-01	SCREW +BVTT 3X6 (S)
64	7-685-871-09	SCREW +BVTT 3X6 (S)
65	7-685-872-01	SCREW +BVTT 3X8 (S)
66	9-911-815-02	CUSHION
67	9-911-837-XX	CUSHION (B), FILTER
68	9-911-841-XX	CUSHION
69	9-911-850-XX	FELT, TENSION REGULATOR
70	9-911-863-XX	SHEET, INSULATING

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
- UA----: μA---, UPA----: μPA---, UPC----: μPC,
- UPD----: μPD---

GENERAL SECTION

No.	Part No.	Description
71	A-2169-073-A	(SILVER)...WINDOW ASSY, CASSETTE
71	A-2169-081-A	(BLACK)...WINDOW ASSY, CASSETTE
72	A-2191-006-A	(SILVER)...ESCUTCHEON ASSY, METER
72	A-2191-014-A	(BLACK)...ESCUTCHEON ASSY, METER
73	A-2310-235-A	(SILVER)...PANEL ASSY, FRONT
73	A-2310-245-A	(BLACK)...PANEL ASSY, FRONT
74	X-3304-405-0	(SILVER)...KNOB ASSY, POWER
74	X-3304-911-0	(BLACK)...KNOB ASSY, POWER
75	2-066-111-08	(G-AEP).....COLLAR

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	1-551-734-11	CORD, CONNECTION (RK-74A)
102	3-315-149-00	CUSHION (LEFT), LOWER
103	3-315-150-00	CUSHION (RIGHT), LOWER
104	3-315-151-00	CUSHION (LEFT), UPPER
105	3-315-152-00	CUSHION (RIGHT), UPPER
106	3-317-159-00	CARTON
107	3-573-625-00	SHEET, POLYETHYLENE
108	3-701-630-00	BAG, POLYETHYLENE
109	3-773-670-11	(AEP,G-AEP,E2/3)...MANUAL, INSTRUCTION
109	3-773-670-21	(US).....MANUAL, INSTRUCTION
109	3-773-670-41	(AEP,G-AEP).....MANUAL, INSTRUCTION
110	3-793-828-11	QUESTIONNAIRE
111	X-3701-105-0	ROD ASSY, CLEANING, HEAD

MECHANISM SECTION

No.	Part No.	Description
301	2-371-561-00	BUSHING (P), INSULATING
302	3-306-223-00	LEVER (B), TRIGGER
303	3-306-224-00	GEAR, PINION
304	3-306-225-00	SPRING
305	3-306-227-01	SCREW, AZIMUTH ADJUSTMENT
306	3-306-228-01	SPRING
307	3-306-237-00	SPRING
308	3-306-239-00	SPRING (LEFT)
309	3-306-240-00	SPRING (RIGHT)
310	3-306-249-00	SPRING (LEFT)
311	3-306-250-00	SPRING (RIGHT)
312	3-306-251-00	PLATE (A), SLIDE
313	3-306-253-00	LEVER (A), TRIGGER
314	3-306-257-00	CLAW, REEL TABLE
315	3-306-258-01	SPRING, TENSION
316	3-306-259-00	SPACER, PC BOARD
317	3-306-260-00	LEVER, FWD
318	3-306-261-00	PLATE, SHIELD, MOTOR
319	3-306-262-00	PULLEY (R), MOTOR
320	3-306-270-00	RETAINER (RIGHT), THRUST
321	3-306-271-00	SLIDER (A), SELECTION
322	3-306-279-00	LEVER, ERASING PROTECTION
323	3-306-281-00	SHAFT, DETECTION LEVER
324	3-306-282-00	LEVER, REC DETECTION, REVERSE
325	3-306-283-00	RETAINER (LEFT), CASSETTE
326	3-306-284-00	RETAINER (RIGHT), CASSETTE
327	3-306-285-00	LEVER, HOLDER FULCRUM
328	3-306-286-00	HOLDER, CASSETTE
329	3-306-287-00	GEAR, TRIGGER
330	3-306-288-00	NUT, ADJUSTMENT, TAPE GUIDE
331	3-306-289-01	SPRING, TENSION
332	3-306-295-01	SPRING, TENSION
333	3-306-296-01	RUBBER, STOPPER
334	3-306-297-01	SEAM, HEAD ADJUSTMENT
335	3-306-297-11	SEAM, HEAD ADJUSTMENT
336	3-307-367-00	BUSHING, SELECT LEVER
337	3-307-394-00	RETAINER (B), THRUST
338	3-307-459-00	RUBBER, HOLDER
339	3-307-460-00	SPRING, COMPRESSION
340	3-307-477-01	SEAM (A), HEAD ADJUSTMENT
341	3-307-477-11	SEAM (A), HEAD ADJUSTMENT
342	3-307-477-21	SEAM (A), HEAD ADJUSTMENT
343	3-307-477-31	SEAM (A), HEAD ADJUSTMENT
344	3-307-477-41	SEAM (A), HEAD ADJUSTMENT
345	3-307-482-00	WASHER, LUMILER

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA---: μA---, UPA---: μPA---, UPC---: μPC,
UPD---: μPD---

MECHANISM SECTION

No.	Part No.	Description
346	3-312-441-00	RING, PISTON
347	♣;3-312-615-11	HEAT SINK
348	♣;3-317-118-00	HOLDER (A), LED
349	♣;3-317-119-00	HOLDER (B), LED
350	3-317-122-00	HINGE, PC BOARD
351	♣;3-317-126-00	HOLDER, FL TUBE
352	♣;3-317-140-00	HEAT SINK, SYSTEM CONTROL
353	♣;3-317-143-00	BOX (2), IC SHIELD
354	♣;3-317-144-01	PLATE, SHIELD, BIAS
355	3-534-027-00	SPRING, TENSION
356	3-538-051-00	RUBBER, BRAKE
357	3-555-122-00	SPRING, COMPRESSION
358	3-558-708-11	WASHER, STOPPER
359	3-558-708-21	WASHER, STOPPER
360	3-561-850-11	BELT, CAPSTAN
361	3-564-027-11	FELT, LIMITER
362	3-564-933-00	BOSS, FITTING, SPRING
363	3-570-027-00	SCREW, MOTOR
364	3-570-118-00	CUSHION, MOTOR
365	3-571-850-11	SPRING, COMPRESSION
366	3-572-365-01	SHEET (A), INSULATING
367	3-575-304-00	SHAFT, GEAR, FR
368	3-575-318-00	LEVER, LOCK, TUNING
369	3-575-321-00	RETAINER, THRUST, CAPSTAN
370	3-575-324-00	GEAR, LIMITER
371	3-575-327-00	STOPPER
372	3-575-328-00	HOLDER, LAMP
373	♣;3-575-331-00	LEVER, DETECTION, HALF
374	3-575-332-00	GEAR, FR
375	3-575-333-00	PISTON
376	3-575-345-00	SPRING
377	3-575-348-00	ROLLER, GUIDE, THREADING
378	3-575-351-00	SPRING
379	3-575-353-11	TABLE, REEL
380	3-575-356-00	SPRING
381	3-575-358-00	SPRING, TENSION
382	3-575-359-00	SPRING, TENSION
383	3-575-365-00	SPRING, COMPRESSION
384	3-575-368-00	SPRING, COMPRESSION
385	3-575-414-00	SPRING, COMPRESSION
386	3-575-415-11	ARBOR, MOVABLE
387	3-575-416-11	ARBOR, FIXED
388	3-575-438-00	LEVER, DETECTION
389	♣;3-575-440-00	BRACKET, LEVER, DETECTION
390	3-575-441-00	SPRING

MECHANISM SECTION

No.	Part No.	Description
391	3-575-446-00	LEVER, DETECTION, METAL
392	3-575-448-00	LEVER, LOCK
393	3-575-449-00	LEVER, DETECTION, REC
394	3-575-458-00	SPRING
395	3-575-460-00	LEVER, SELECT TUNE
396	3-575-469-00	LINING, BRAKE
397	3-575-491-00	PLATE, BRAKE
398	3-578-390-00	SPRING, TENSION
399	3-632-261-00	SPRING
400	3-669-305-00	BUSHING
401	3-701-438-11	WASHER, 2.5MM (t=0.25)
402	3-701-439-11	WASHER, 3MM (t=0.25)
403	3-701-439-21	WASHER, 3MM (t=0.50)
404	3-701-444-11	WASHER, 5
405	7-621-714-16	SET-SCREW, SLOT 1.7X2.5
406	7-621-714-36	SET-SCREW, SLOT 1.7X3 FLAT POINT
407	7-621-732-08	SET-SCT, HEX. 2X3 FLAT POINT
408	7-621-772-05	SCREW +B 2X3
409	7-621-772-08	SCREW +B 2X3
410	7-621-775-00	SCREW +B 2.6X3
411	7-621-775-10	SCREW +B 2.6X4
412	7-624-104-04	STOP RING 2.0, TYPE -E
413	7-624-108-04	RING, RETAINING E-4
414	7-624-109-04	STOP RING 5.0, TYPE -E
415	7-627-552-28	SCREW, PRECISION +P 1.7X2
416	7-627-556-58	SCREW +P 2.6X5
417	7-671-111-11	STEEL BALL 1.5MM
418	7-671-113-02	STEEL BALL 3
419	7-682-548-04	SCREW +B 3X8
420	7-682-947-01	SCREW +PSW 3X6
421	7-682-949-01	SCREW +PSW 3X10
422	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
423	7-685-647-71	SCREW +BVTP 3X10 TYPE2 SLIT
424	7-685-860-04	SCREW +BVTT 2.6X4 (S)
425	7-685-861-01	SCREW +BVTT 2.6X5 (S)
426	7-685-870-01	SCREW +BVTT 3X5 (S)
427	7-685-871-01	SCREW +BVTT 3X6 (S)
428	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
429	7-687-250-21	SCREW, TOTSU PTPWH 3X16, TYPE2
430	7-688-001-01	W 2, SMALL
431	7-688-002-01	W 2.6, SMALL
432	9-911-815-02	CUSHION
433	A-2108-089-A	FITTING BLOCK ASSY, HEAD
434	♣;X-3575-301-0	PLATE (A) ASSY, HOLDER FULCRUM
435	♣;X-3575-302-0	PLATE (B) ASSY, FULCRUM

NOTE:

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- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA....: μA..., UPA....: μPA..., UPC....: μPC,
UPD....: μPD....

MECHANISM SECTION

No.	Part No.	Description
436	X-3575-303-0	METAL ASSY, CAPSTAN
437	X-3575-310-0	LEVER ASSY, TENSION, BACK
438	X-3575-348-0	MOTOR ASSY, REEL
439	X-3575-356-0	FLYWHEEL (LEFT) ASSY
440	X-3575-357-0	FLYWHEEL (RIGHT) ASSY
441	•;X-3575-358-0	BRACKET ASSY, SOLENOID
442	X-3575-360-0	PINCH LEVER (RIGHT) ASSY
443	X-3575-361-0	PINCH LEVER (LEFT) ASSY
444	•;X-3575-362-0	PLATE (LEFT) ASSY, LIMITER
445	•;X-3575-363-0	PLATE (RIGHT) ASSY, LIMITER
446	•;X-3575-364-0	BRACKET ASSY, LEVER
447	•;X-3575-365-0	LEVER (LEFT) ASSY, GUIDE
448	•;X-3575-366-0	LEVER (RIGHT) ASSY, GUIDE
449	X-3575-367-0	HEAD BLOCK ASSY
450	•;X-3575-368-0	CHASSIS ASSY, MECHANICAL
451	X-3575-369-0	CHASSIS (RIGHT) ASSY, HEAD
452	X-3575-370-0	LEVER (R) ASSY, BACK TENSION
453	X-3575-371-0	RETAINER ASSY, CASSETTE
454	X-3575-376-1	TAPE GUIDE ASSY
455	X-3575-375-1	DIRECT HOLD ASSY

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	Δ.1-526-576-51	(E2/3)...SELECTOR, POWER VOLTAGE
502	Δ.1-528-120-00	BATTERY, LITHIUM (CR-2025)
503	1-533-131-00	HOLDER, FUSE
504	1-535-506-11	(E2/3)...CONNECTION PRESS TERMINAL
505	Δ.1-534-817-XX	(AEP,G-AEP).CORD, POWER, EURO PLUG
505	Δ.1-551-472-00	(E2).....CORD, POWER
505	Δ.1-551-506-XX	(US).....CORD, POWER
505	Δ.1-555-734-00	(E3).....CORD, POWER

ELECTRICAL PARTS

Ref.No.	Part No.	Description
506	•;1-560-060-00	PIN, CONNECTOR 2P
507	1-562-544-00	SOCKET 5P
508	•;1-603-823-00	PC BOARD, PHOTO
509	•;1-611-500-00	PC BOARD, MD SW
510	•;1-611-501-00	PC BOARD, DIR SW
511	•;1-611-502-00	PC BOARD, HEAD TRANSLATION
512	•;1-611-576-00	PC BOARD, AUDIO
513	•;1-611-577-00	PC BOARD, MIC JACK
514	•;1-611-578-00	PC BOARD, INPUT/OUTPUT JACK
515	•;1-611-579-00	PC BOARD, HEADPHONE JACK
516	•;1-611-580-11	PC BOARD, SYSTEM CONTROL
517	•;1-611-581-11	PC BOARD, TIMER SW
518	•;1-611-582-11	PC BOARD,DIRECTION(REV)MODE SW
519	•;1-611-583-11	PC BOARD, REMOCON SOCKET
520	•;1-611-585-00	PC BOARD, INDICATION
521	•;1-612-397-21	(US).....PC BOARD, FUSE
521	1-612-397-31	(AEP,G-AEP,E2/3)...PC BOARD, FUSE
522	•;A-2023-298-A	MOUNTED PCB, MD SWITCH
523	•;A-2056-208-A	MOUNTED PCB, AUDIO
524	•;A-2056-210-A	MOUNTED PCB, INDICATION
525	•;A-2056-220-A	MOUNTED PCB, SYSTEM CONTROL
526	1-612-712-11	(G-AEP).....PC BOARD, FILTER
C001	Δ.1-161-744-00	CAP, CERAMIC 10000PF FZ 400V
C002	1-161-741-00	(G-AEP)....CERAMIC 1000PF
C003	1-161-741-00	(G-AEP)....CERAMIC 1000PF
C004	1-161-741-00	(G-AEP)....CERAMIC 1000PF
C005	1-161-740-00	(US).....CERAMIC 470PF
C006	1-161-740-00	(US).....CERAMIC 470PF
C101	1-123-356-00	ELECT 10MF 20% 16V
C102	1-161-271-00	CERAMIC 100PF 5% 50V
C103	1-123-356-00	ELECT 10MF 20% 16V
C104	1-123-369-00	ELECT 4.7MF 20% 50V
C105	1-123-330-00	ELECT 22MF 20% 16V
C106	1-161-380-00	CERAMIC 0.0015MF 10% 50V
C111	1-161-321-00	CERAMIC 680PF 10% 50V
C112	1-130-305-00	FILM 0.022MF 5% 100V
C113	1-124-185-00	ELECT 4.7MF 20% 50V
C114	1-108-571-00	MYLAR 0.0047MF 5% 50V
C115	1-161-316-00	CERAMIC 270PF 10% 50V
C121	1-130-630-00	FILM 0.068MF 5% 50V
C122	1-130-633-00	FILM 0.12MF 5% 50V
C123	1-130-635-00	FILM 0.18MF 5% 50V
C124	1-130-637-00	FILM 0.27MF 5% 50V
C125	1-130-625-00	FILM 0.027MF 5% 50V
C126	1-123-380-00	ELECT 1MF 20% 50V

NOTE:

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- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA----: μA---, UPA----: μPA---, UPC----: μPC,
UPD----: μPD---

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C127	1-130-635-00	FILM	0.18MF	5%	50V
C128	1-130-630-00	FILM	0.068MF	5%	50V
C129	1-123-380-00	ELECT	1MF	20%	50V
C130	1-130-633-00	FILM	0.12MF	5%	50V
C131	1-130-620-00	FILM	0.01MF	5%	50V
C132	1-130-622-00	FILM	0.015MF	5%	50V
C133	1-130-620-00	FILM	0.01MF	5%	50V
C134	1-124-185-00	ELECT	4.7MF	20%	50V
C135	1-123-307-00	ELECT	100MF	20%	10V
C136	1-123-307-00	ELECT	100MF	20%	10V
C151	1-123-369-00	ELECT	4.7MF	20%	50V
C152	1-130-638-00	FILM	0.33MF	5%	50V
C153	1-123-330-00	ELECT	22MF	20%	16V
C154	1-124-185-00	ELECT	4.7MF	20%	50V
C155	1-161-318-00	CERAMIC	390PF	10%	50V
C156	1-107-036-00	MICA	68PF	5%	500V
C157	1-107-165-00	MICA	56PF	5%	500V
C158	1-108-577-00	MYLAR	0.0082MF	5%	50V
C159	1-130-620-00	FILM	0.01MF	5%	50V
C160	1-130-629-00	FILM	0.056MF	5%	50V
C161	1-130-620-00	FILM	0.01MF	5%	50V
C162	1-130-620-00	FILM	0.01MF	5%	50V
C163	1-130-630-00	FILM	0.068MF	5%	50V
C164	1-130-620-00	FILM	0.01MF	5%	50V
C165	1-108-567-00	MYLAR	0.0033MF	5%	50V
C166	1-130-626-00	FILM	0.033MF	5%	50V
C176	1-123-369-00	ELECT	4.7MF	20%	50V
C177	1-123-356-00	ELECT	10MF	20%	16V
C192	1-123-356-00	ELECT	10MF	20%	16V
C201	1-123-356-00	ELECT	10MF	20%	16V
C202	1-161-271-00	CERAMIC	100PF	5%	50V
C203	1-123-356-00	ELECT	10MF	20%	16V
C204	1-123-369-00	ELECT	4.7MF	20%	50V
C205	1-123-330-00	ELECT	22MF	20%	16V
C206	1-161-380-00	CERAMIC	0.0015MF	10%	50V
C211	1-161-321-00	CERAMIC	680PF	10%	50V
C212	1-130-305-00	FILM	0.022MF	5%	100V
C213	1-124-185-00	ELECT	4.7MF	20%	50V
C214	1-108-571-00	MYLAR	0.0047MF	5%	50V
C215	1-161-316-00	CERAMIC	270PF	10%	50V
C221	1-130-630-00	FILM	0.068MF	5%	50V
C222	1-130-633-00	FILM	0.12MF	5%	50V
C223	1-130-635-00	FILM	0.18MF	5%	50V
C224	1-130-637-00	FILM	0.27MF	5%	50V
C225	1-130-625-00	FILM	0.027MF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C226	1-123-380-00	ELECT	1MF	20%	50V
C227	1-130-635-00	FILM	0.18MF	5%	50V
C228	1-130-630-00	FILM	0.068MF	5%	50V
C229	1-123-380-00	ELECT	1MF	20%	50V
C230	1-130-633-00	FILM	0.12MF	5%	50V
C231	1-130-620-00	FILM	0.01MF	5%	50V
C232	1-130-622-00	FILM	0.015MF	5%	50V
C233	1-130-620-00	FILM	0.01MF	5%	50V
C234	1-124-185-00	ELECT	4.7MF	20%	50V
C235	1-123-307-00	ELECT	100MF	20%	10V
C236	1-123-307-00	ELECT	100MF	20%	10V
C251	1-123-369-00	ELECT	4.7MF	20%	50V
C252	1-130-638-00	FILM	0.33MF	5%	50V
C253	1-123-330-00	ELECT	22MF	20%	16V
C254	1-124-185-00	ELECT	4.7MF	20%	50V
C255	1-161-318-00	CERAMIC	390PF	10%	50V
C256	1-107-036-00	MICA	68PF	5%	500V
C257	1-107-165-00	MICA	56PF	5%	500V
C258	1-108-577-00	MYLAR	0.0082MF	5%	50V
C259	1-130-620-00	FILM	0.01MF	5%	50V
C260	1-130-629-00	FILM	0.056MF	5%	50V
C261	1-130-620-00	FILM	0.01MF	5%	50V
C262	1-130-620-00	FILM	0.01MF	5%	50V
C263	1-130-630-00	FILM	0.068MF	5%	50V
C264	1-130-620-00	FILM	0.01MF	5%	50V
C265	1-108-567-00	MYLAR	0.0033MF	5%	50V
C266	1-130-626-00	FILM	0.033MF	5%	50V
C276	1-123-369-00	ELECT	4.7MF	20%	50V
C277	1-123-369-00	ELECT	4.7MF	20%	50V
C292	1-123-356-00	ELECT	10MF	20%	16V
C301	1-123-337-00	ELECT	1000MF	20%	25V
C302	1-123-337-00	ELECT	1000MF	20%	25V
C303	1-123-307-00	ELECT	100MF	20%	10V
C304	1-123-307-00	ELECT	100MF	20%	10V
C305	1-124-070-00	ELECT	220MF	20%	10V
C306	1-124-070-00	ELECT	220MF	20%	10V
C307	1-123-321-00	ELECT	220MF	20%	16V
C308	1-123-321-00	ELECT	220MF	20%	16V
C309	1-123-382-00	ELECT	3.3MF	20%	50V
C311	1-123-356-00	ELECT	10MF	20%	16V
C312	1-123-379-00	ELECT	0.47MF	20%	50V
C313	1-124-089-00	ELECT	2.2MF	20%	50V
C314	1-130-023-00	FILM	0.0027MF	5%	100V
C315	1-130-023-00	FILM	0.0027MF	5%	100V
C316	1-130-289-00	FILM	0.0047MF	5%	100V

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- MF: μF , PF: $\mu\mu\text{F}$.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
 UA.... : μA ..., UPA.... : μPA ..., UPC.... : μPC ,
 UPD.... : μPD ...

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C317	1-129-714-00	FILM	0.01MF	5%	630V
C324	1-123-307-00	ELECT	100MF	20%	10V
C331	1-123-307-00	ELECT	100MF	20%	10V
C332	1-123-307-00	ELECT	100MF	20%	10V
C333	1-123-307-00	ELECT	100MF	20%	10V
C334	1-123-307-00	ELECT	100MF	20%	10V
C335	1-123-330-00	ELECT	22MF	20%	16V
C337	1-123-356-00	ELECT	10MF	20%	16V
C339	1-161-330-00	CERAMIC	0.01MF	30%	25V
C340	1-161-330-00	CERAMIC	0.01MF	30%	25V
C501	1-123-364-00	ELECT	1000MF	20%	50V
C502	1-123-380-00	ELECT	1MF	20%	50V
C503	1-123-357-00	ELECT	22MF	20%	50V
C504	1-123-321-00	ELECT	220MF	20%	16V
C505	1-123-328-00	ELECT	4.7MF	20%	25V
C506	1-123-310-00	ELECT	470MF	20%	10V
C507	1-123-356-00	ELECT	10MF	20%	16V
C508	1-123-312-00	ELECT	2200MF	20%	10V
C509	1-123-306-00	ELECT	47MF	20%	10V
C510	1-123-308-00	ELECT	220MF	20%	10V
C511	1-123-356-00	ELECT	10MF	20%	16V
C512	1-123-338-00	ELECT	2200MF	20%	25V
C513	1-123-380-00	ELECT	1MF	20%	50V
C514	1-161-330-00	CERAMIC	0.01MF	30%	25V
C515	1-161-330-00	CERAMIC	0.01MF	30%	25V
C516	1-161-330-00	CERAMIC	0.01MF	30%	25V
C517	1-130-628-00	FILM	0.047MF	5%	50V
C518	1-130-628-00	FILM	0.047MF	5%	50V
C519	1-130-634-00	FILM	0.15MF	5%	50V
C520	1-123-380-00	ELECT	1MF	20%	50V
C521	1-162-056-00	CERAMIC	33PF	5%	50V
C522	1-162-056-00	CERAMIC	33PF	5%	50V
C523	1-161-974-00	CERAMIC	0.1MF	0	16V
C524	1-161-494-00	CERAMIC	0.022MF	30%	25V
C525	1-161-494-00	CERAMIC	0.022MF	30%	25V
C526	1-161-494-00	CERAMIC	0.022MF	30%	25V
C527	1-161-494-00	CERAMIC	0.022MF	30%	25V
C528	1-161-494-00	CERAMIC	0.022MF	30%	25V
C529	1-161-494-00	CERAMIC	0.022MF	30%	25V
C530	1-161-494-00	CERAMIC	0.022MF	30%	25V
C531	1-123-295-00	ELECT	100MF	20%	6.3V
C532	1-123-381-00	ELECT	2.2MF	20%	50V
C533	1-123-381-00	ELECT	2.2MF	20%	50V
C534	1-123-298-00	ELECT	470MF	20%	6.3V
C535	1-161-326-00	CERAMIC	0.0022MF	30%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C536	1-161-326-00	CERAMIC	0.0022MF	30%	50V
C537	1-161-326-00	CERAMIC	0.0022MF	30%	50V
C538	1-123-363-00	ELECT	470MF	20%	50V
C539	1-123-295-00	ELECT	100MF	20%	6.3V
C540	1-161-974-00	CERAMIC	0.1MF	0	16V
C541	1-161-262-00	CERAMIC	18PF	5%	50V
C542	1-161-262-00	CERAMIC	18PF	5%	50V
C543	1-123-356-00	ELECT	10MF	20%	16V
C544	1-124-089-00	ELECT	2.2MF	20%	50V
C701	1-161-330-00	CERAMIC	0.01MF	30%	25V
C702	1-161-494-00	CERAMIC	0.022MF	30%	25V
C703	1-123-356-00	ELECT	10MF	20%	16V
C704	1-123-319-00	ELECT	47MF	20%	16V
C803	1-123-356-00	ELECT	10MF	20%	25V
C806	1-123-354-00	ELECT	3.3MF	20%	50V
C807	1-130-623-00	FILM	0.018MF	5%	50V
C808	1-123-356-00	ELECT	10MF	20%	50V
C809	1-123-295-00	ELECT	100MF	20%	6.3V
C810	1-161-741-00	(US,G-AEP)...CERAMIC	0.022MF	30%	25V
C1001	1-161-327-00	CERAMIC	0.0033MF	30%	50V
C1002	1-161-327-00	CERAMIC	0.0033MF	30%	50V
C1003	1-123-332-00	ELECT	47MF	20%	16V
C1004	1-123-322-00	ELECT	47MF	20%	16V
C1005	1-123-307-00	ELECT	100MF	20%	10V
▲CNP301;	1-560-605-00	PIN, CONNECTOR	6P		
▲CNP302;	1-560-708-00	PIN, CONNECTOR	2P		
▲CNP303;	1-560-708-00	PIN, CONNECTOR	2P		
▲CNP304;	1-560-060-00	PIN, CONNECTOR	2P		
▲CNP305;	1-560-062-00	PIN, CONNECTOR	4P		
▲CNP306;	1-560-708-00	PIN, CONNECTOR	2P		
▲CNP307;	1-560-602-00	PIN, CONNECTOR	3P		
▲CNP502;	1-560-061-00	PIN, CONNECTOR	3P		
▲CNP503;	1-560-338-00	PIN, CONNECTOR	7P		
▲CNP504;	1-560-062-00	PIN, CONNECTOR	4P		
▲CNP505;	1-560-063-00	PIN, CONNECTOR	5P		
▲CNP506;	1-560-064-00	PIN, CONNECTOR	6P		
▲CNP507;	1-560-062-00	PIN, CONNECTOR	4P		
▲CNP508;	1-560-061-00	PIN, CONNECTOR	3P		
▲CNP509;	1-560-063-00	PIN, CONNECTOR	5P		
▲CNP512;	1-560-061-00	PIN, CONNECTOR	3P		
▲CNP513;	1-560-063-00	PIN, CONNECTOR	5P		
▲CNP701;	1-560-061-00	PIN, CONNECTOR	3P		
CT301	1-141-225-00	CAP, TUNING, TRIMMER			

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: $\mu\mu\text{F}$.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
UA....: μA ..., UPA....: μPA ..., UPC....: μPC ,
UPD....: μPD ...

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D101	8-719-107-94	DIODE 1SS202-1
D201	8-719-107-94	DIODE 1SS202-1
D301	8-719-200-02	DIODE 10E-2
D302	8-719-200-02	DIODE 10E-2
D303	8-719-200-02	DIODE 10E-2
D304	8-719-200-02	DIODE 10E-2
D305	8-719-910-52	DIODE HZ15-2L
D306	8-719-107-94	DIODE 1SS202-1
D307	8-719-910-67	DIODE HZ6C1L
D308	8-719-107-94	DIODE 1SS202-1
D309	8-719-910-67	DIODE HZ6C1L
D310	8-719-200-02	DIODE 10E-2
D311	8-719-200-02	DIODE 10E-2
D312	8-719-107-94	DIODE 1SS202-1
D501	8-719-200-02	DIODE 10E-2
D502	8-719-200-02	DIODE 10E-2
D503	8-719-200-02	DIODE 10E-2
D504	8-719-200-02	DIODE 10E-2
D505	8-719-931-08	DIODE EQB01-08
D506	8-719-913-62	DIODE HZ36-2L
D507	8-719-910-25	DIODE HZ12B2L
D508	8-719-910-14	DIODE HZ11B1L
D509	8-719-910-94	DIODE HZ9B1L
D510	8-719-910-71	DIODE HZ7A1L
D511	8-719-107-94	DIODE 1SS202-1
D512	8-719-107-94	DIODE 1SS202-1
D513	8-719-107-94	DIODE 1SS202-1
D514	8-719-107-94	DIODE 1SS202-1
D515	8-719-200-02	DIODE 10E-2
D516	8-719-200-02	DIODE 10E-2
D517	8-719-107-94	DIODE 1SS202-1
D518	8-719-107-94	DIODE 1SS202-1
D519	8-719-107-94	DIODE 1SS202-1
D520	8-719-107-94	DIODE 1SS202-1
D521	8-719-107-94	DIODE 1SS202-1
D701	8-719-107-94	DIODE 1SS202-1
D801	8-719-990-42	DIODE HZ24-2L
D802	8-719-107-94	DIODE 1SS202-1
D803	8-719-107-94	DIODE 1SS202-1
D804	8-719-107-94	DIODE 1SS202-1
D805	8-719-107-94	DIODE 1SS202-1
D806	8-719-107-94	DIODE 1SS202-1
D807	8-719-107-94	DIODE 1SS202-1
D808	8-719-107-94	DIODE 1SS202-1
D809	8-719-107-94	DIODE 1SS202-1

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D810	8-719-107-94	DIODE 1SS202-1
D811	8-719-107-94	DIODE 1SS202-1
D812	8-719-107-94	DIODE 1SS202-1
D813	8-719-107-94	DIODE 1SS202-1
D814	8-719-107-94	DIODE 1SS202-1
D815	8-719-107-94	DIODE 1SS202-1
D816	8-719-107-94	DIODE 1SS202-1
D817	8-719-107-94	DIODE 1SS202-1
D818	8-719-107-94	DIODE 1SS202-1
D819	8-719-107-94	DIODE 1SS202-1
D820	8-719-107-94	DIODE 1SS202-1
D821	8-719-107-94	DIODE 1SS202-1
D822	8-719-107-94	DIODE 1SS202-1
D823	8-719-107-94	DIODE 1SS202-1
D824	8-719-107-94	DIODE 1SS202-1
D825	8-719-107-94	DIODE 1SS202-1
D826	8-719-902-78	DIODE SLR-34DC5
D827	8-719-934-05	DIODE SLR-34URC5
D828	8-719-902-77	DIODE SLR-34PC5
D829	8-719-902-77	DIODE SLR-34PC5
D830	8-719-902-77	DIODE SLR-34PC5
D831	8-719-906-46	DIODE SLR34YC5
D832	8-719-906-46	DIODE SLR34YC5
D833	8-719-902-77	DIODE SLR-34PC5
D834	8-719-902-77	DIODE SLR-34PC5
D835	8-719-902-77	DIODE SLR-34PC5
D836	8-719-902-77	DIODE SLR-34PC5
D837	8-719-906-46	DIODE SLR34YC5
D838	8-719-107-94	DIODE 1SS202-1
D901	8-719-107-94	DIODE 1SS202-1
D902	8-719-902-77	DIODE SLR-34PC5
D1001	8-719-200-02	DIODE 10E-2
D1002	8-719-200-02	DIODE 10E-2
D1003	8-719-107-94	DIODE 1SS202-1
D1004	8-719-107-94	DIODE 1SS202-1
D1005	8-719-107-94	DIODE 1SS202-1
F1	△.1-532-570-00	(US).....FUSE, GLASS TUBE
F1	△.1-532-285-00	(AEP,G-AEP,E2/3)....FUSE, TIME-LAG
F2	△.1-532-570-00	(US).....FUSE, GLASS TUBE
F2	△.1-532-285-00	(AEP,G-AEP,E2/3)....FUSE, TIME-LAG
FL	1-519-309-00	INDICATOR TUBE, FLUORESCENT
IC101	8-752-002-80	IC CX20028
IC102	8-759-600-02	IC M5218L
IC201	8-752-002-70	IC CX20027

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- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μpF .

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
UA....: μA ..., UPA....: μPA ..., UPC....: μPC ,
UPD....: μPD ...

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC202	8-759-600-02	IC M5218L
IC301	8-759-101-56	IC CX10033A
IC302	8-759-101-55	IC CX10032A
IC303	8-757-919-10	IC CX-7919A
IC304	8-759-961-38	IC BA6138
IC305	8-759-700-47	IC CX10035
IC306	8-759-600-02	IC M5218L
IC307	8-759-745-60	IC NJM4560D
IC308	8-759-600-02	IC M5218L
IC501	8-759-201-90	IC TMP47C40P-6302
IC502	8-755-650-31	IC CX565-031
IC503	8-759-700-48	IC NJM2903S
IC504	8-759-240-66	IC TC4066BP
IC505	8-759-240-66	IC TC4066BP
IC506	8-759-700-46	IC CX10034
IC507	8-759-240-69	IC TC4069UBP
IC508	8-759-240-69	IC TC4069UBP
IC509	8-759-240-69	IC TC4069UBP
IC701	8-759-240-69	IC TC4069UBP
IC801	8-759-201-91	IC TMP4720N-1008
IC802	8-759-904-72	IC MSL9359RS
IC803	8-759-800-76	IC LB1245
IC804	8-759-800-76	IC LB1245
IC805	8-759-800-80	IC LB1200
J101	1-507-797-21	JACK, LARGE TYPE (L-MIC)
J102	1-507-908-11	JACK, PIN 4P (L-LINE IN)
J103	1-507-908-11	JACK, PIN 4P (L-LINE OUT)
J201	1-507-797-21	JACK, LARGE TYPE (R-MIC)
J202	1-507-908-11	JACK, PIN 4P (R-LINE IN)
J203	1-507-908-11	JACK, PIN 4P (R-LINE OUT)
J301	1-507-796-21	JACK (HEADPHONES)
L101	1-408-930-00	MICRO INDUCTOR 33MMH
L102	1-408-923-00	MICRO INDUCTOR 8.2MMH
L103	1-408-923-00	MICRO INDUCTOR 8.2MMH
L104	1-408-923-00	MICRO INDUCTOR 8.2MMH
L105	1-408-929-00	MICRO INDUCTOR 27MMH
L106	1-408-253-00	MICRO INDUCTOR 4.7MMH
L201	1-408-930-00	MICRO INDUCTOR 33MMH
L202	1-408-923-00	MICRO INDUCTOR 8.2MMH
L203	1-408-923-00	MICRO INDUCTOR 8.2MMH
L204	1-408-923-00	MICRO INDUCTOR 8.2MMH
L205	1-408-929-00	MICRO INDUCTOR 27MMH
L206	1-408-253-00	MICRO INDUCTOR 4.7MMH
L501	1-408-080-00	MICRO INDUCTOR 100UH
L502	1-408-080-00	MICRO INDUCTOR 100UH
LPF101	1-235-099-00	FILTER, LOW PASS
LPF201	1-235-099-00	FILTER, LOW PASS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
M1001	1-541-239-00	MOTOR
M1002		INCLUDED IN (438)
PL1001	1-518-340-71	LAMP, PILOT (CASSETTE THROUGH)
PL1002	1-518-548-11	LAMP, PILOT (DIR, FWD)
PL1003	1-518-548-11	LAMP, PILOT (DIR, REV)
PM1001	1-454-333-00	SOLENOID, PLUNGER (HEAD)
PM1002	1-454-291-00	SOLENOID, PLUNGER (AMS)
PM1003	1-454-363-00	SOLENOID, PLUNGER (DIR)
PS301	1-532-605-00	LINK, IC
PS302	1-532-605-00	LINK, IC
PS501	1-532-605-00	LINK, IC
PS504	1-532-605-00	LINK, IC
PT	A.1-447-818-11	(US).....TRANSFORMER, POWER
PT	A.1-447-819-11	(E2/3)....TRANSFORMER, POWER
PT	A.1-447-820-11	(AEP,G-AEP)....TRANSFORMER, POWER
Q101	8-729-102-03	TRANSISTOR 2SD1020
Q102	8-729-102-03	TRANSISTOR 2SD1020
Q201	8-729-102-03	TRANSISTOR 2SD1020
Q202	8-729-102-03	TRANSISTOR 2SD1020
Q301	8-729-180-93	TRANSISTOR 2SD809
Q302	8-729-173-13	TRANSISTOR 2SB731
Q303	8-729-180-93	TRANSISTOR 2SD809
Q304	8-729-173-13	TRANSISTOR 2SB731
Q305	8-729-245-83	TRANSISTOR 2SC2458
Q306	8-729-245-83	TRANSISTOR 2SC2458
Q307	8-729-178-54	TRANSISTOR 2SC2785
Q308	8-729-178-54	TRANSISTOR 2SC2785
Q309	8-729-178-54	TRANSISTOR 2SC2785
Q310	8-729-245-83	TRANSISTOR 2SC2458
Q311	8-729-900-63	TRANSISTOR DTA124ES
Q501	8-729-201-78	TRANSISTOR 2SD1406
Q502	8-729-201-78	TRANSISTOR 2SD1406
Q503	8-729-201-78	TRANSISTOR 2SD1406
Q505	8-729-180-93	TRANSISTOR 2SD809
Q506	8-729-245-83	TRANSISTOR 2SC2458
Q507	8-729-245-83	TRANSISTOR 2SC2458
Q508	8-729-245-83	TRANSISTOR 2SC2458
Q509	8-729-245-83	TRANSISTOR 2SC2458
Q510	8-729-245-83	TRANSISTOR 2SC2458
Q511	8-729-900-37	TRANSISTOR DTC124EF
Q512	8-729-900-37	TRANSISTOR DTC124EF
Q513	8-729-900-37	TRANSISTOR DTC124EF
Q514	8-729-900-63	TRANSISTOR DTA124ES
Q515	8-729-900-63	TRANSISTOR DTA124ES
Q516	8-729-900-63	TRANSISTOR DTA124ES

NOTE:

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- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:


- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA....: μA..., UPA....: μPA..., UPC....: μPC,
UPD....: μPD...

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q517	8-729-900-63	TRANSISTOR DTA124ES
Q520	8-729-900-63	TRANSISTOR DTA124ES
Q521	8-729-195-23	TRANSISTOR 2SA952
Q522	8-729-195-23	TRANSISTOR 2SA952
Q523	8-729-102-03	TRANSISTOR 2SD1020
Q524	8-729-102-03	TRANSISTOR 2SD1020
Q525	8-729-900-63	TRANSISTOR DTA124E
Q526	8-729-900-37	TRANSISTOR DTC124EF
Q527	8-729-180-93	TRANSISTOR 2SD809
Q529	8-729-374-02	TRANSISTOR 2SB740
Q530	8-729-374-02	TRANSISTOR 2SB740
Q531	8-729-177-43	TRANSISTOR 2SD774
Q532	8-729-177-43	TRANSISTOR 2SD774
Q533	8-729-900-37	TRANSISTOR DTC124EF
Q534	8-729-900-37	TRANSISTOR DTC124EF
Q535	8-729-900-63	TRANSISTOR DTA124ES
Q536	8-729-900-63	TRANSISTOR DTA124ES
Q537	8-729-900-63	TRANSISTOR DTA124ES
Q538	8-729-900-63	TRANSISTOR DTA124ES
Q701	8-729-177-43	TRANSISTOR 2SD774
Q702	8-729-900-63	TRANSISTOR DTA124ES
Q703	8-729-245-83	TRANSISTOR 2SC2458
Q704	8-729-245-83	TRANSISTOR 2SC2458
Q705	8-729-245-83	TRANSISTOR 2SC2458
Q706	8-729-900-37	TRANSISTOR DTC124EF
Q707	8-729-900-37	TRANSISTOR DTC124EF
Q801	8-729-900-63	TRANSISTOR DTA124ES
Q802	8-729-900-63	TRANSISTOR DTA124ES
Q803	8-729-900-63	TRANSISTOR DTA124ES
Q804	8-729-900-63	TRANSISTOR DTA124ES
Q805	8-729-245-83	TRANSISTOR 2SC2458
Q1001	8-729-101-02	TRANSISTOR PH102
Q1002	8-729-101-02	TRANSISTOR PH102
Q1003	1-806-713-11	PHOTO SENSOR
R101	1-246-506-00	CARBON 24K 5% 1/4W
R102	1-246-512-00	CARBON 43K 5% 1/4W
R103	1-247-155-00	CARBON 10K 5% 1/4W
R104	1-247-115-00	CARBON 220 5% 1/4W
R105	1-247-167-00	CARBON 33K 5% 1/4W
R106	1-246-537-00	CARBON 470K 5% 1/4W
R107	1-246-485-00	CARBON 3.3K 5% 1/4W
R108	1-246-545-00	CARBON 1M 5% 1/4W
R109	1-247-151-00	CARBON 6.8K 5% 1/4W
R110	1-247-119-00	CARBON 330 5% 1/4W
R111	1-247-165-00	CARBON 27K 5% 1/4W
R112	1-247-107-00	CARBON 100 5% 1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R113	1-246-524-00	CARBON	130K	5%	1/4W
R114	1-246-490-00	CARBON	5.1K	5%	1/4W
R115	1-246-504-00	CARBON	20K	5%	1/4W
R116	1-246-530-00	CARBON	240K	5%	1/4W
R117	1-246-499-00	CARBON	12K	5%	1/4W
R118	1-247-155-00	CARBON	10K	5%	1/4W
R121	1-247-831-00	CARBON	1K	5%	1/6W
R122	1-246-466-00	CARBON	510	5%	1/4W
R123	1-214-731-00	METAL	1.2K	1%	1/4W
R124	1-247-886-00	CARBON	200K	5%	1/6W
R125	1-247-888-00	CARBON	240K	5%	1/6W
R126	1-247-887-00	CARBON	220K	5%	1/6W
R127	1-247-845-00	CARBON	3.9K	5%	1/6W
R128	1-247-886-00	CARBON	200K	5%	1/6W
R129	1-247-887-00	CARBON	220K	5%	1/6W
R130	1-214-753-00	METAL	10K	1%	1/4W
R131	1-247-820-00	CARBON	360	5%	1/6W
R132	1-247-845-00	CARBON	3.9K	5%	1/6W
R133	1-246-490-00	CARBON	5.1K	5%	1/4W
R134	1-246-480-00	CARBON	2K	5%	1/4W
R135	1-247-171-00	CARBON	47K	5%	1/4W
R136	1-214-776-00	METAL	91K	1%	1/4W
R137	1-247-149-00	CARBON	5.6K	5%	1/4W
R138	1-246-483-00	CARBON	2.7K	5%	1/4W
R139	1-246-537-00	CARBON	470K	5%	1/4W
R140	1-214-763-00	METAL	27K	1%	1/4W
R141	1-246-466-00	CARBON	510	5%	1/4W
R142	1-214-729-00	METAL	1K	1%	1/4W
R143	1-247-139-00	CARBON	2.2K	5%	1/4W
R151	1-247-155-00	CARBON	10K	5%	1/4W
R152	1-247-147-00	CARBON	4.7K	5%	1/4W
R153	1-247-139-00	CARBON	2.2K	5%	1/4W
R154	1-247-155-00	CARBON	10K	5%	1/4W
R155	1-247-831-00	CARBON	1K	5%	1/6W
R156	1-246-529-00	CARBON	220K	5%	1/4W
R157	1-246-478-00	CARBON	1.6K	5%	1/4W
R158	1-247-159-00	CARBON	15K	5%	1/4W
R159	1-247-857-00	CARBON	12K	5%	1/6W
R160	1-247-807-00	CARBON	100	5%	1/6W
R161	1-247-852-00	CARBON	7.5K	5%	1/6W
R162	1-247-791-00	CARBON	22	5%	1/6W
R163	1-247-848-00	CARBON	5.1K	5%	1/6W
R164	1-247-857-00	CARBON	12K	5%	1/6W
R165	1-247-791-00	CARBON	22	5%	1/6W
R166	1-247-838-00	CARBON	2K	5%	1/6W

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COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA.... : μA..., UPA.... : μPA..., UPC.... : μPC,
UPD.... : μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R167	1-247-843-00	CARBON	3.3K	5%	1/6W
R168	1-247-841-00	CARBON	2.7K	5%	1/6W
R169	1-247-815-00	CARBON	220	5%	1/6W
R170	1-247-864-00	CARBON	24K	5%	1/6W
R171	1-247-891-00	CARBON	330K	5%	1/6W
R172	1-247-139-00	CARBON	2.2K	5%	1/4W
R176	1-247-155-00	CARBON	10K	5%	1/4W
R177	1-247-867-00	CARBON	33K	5%	1/6W
R178	1-246-529-00	CARBON	220K	5%	1/4W
R179	1-247-167-00	CARBON	33K	5%	1/4W
R180	1-247-179-00	CARBON	100K	5%	1/4W
R181	1-247-107-00	CARBON	100	5%	1/4W
R182	1-247-155-00	CARBON	10K	5%	1/4W
R183	1-247-871-00	CARBON	47K	5%	1/6W
R184	1-247-857-00	CARBON	12K	5%	1/6W
R185	1-247-791-00	CARBON	22	5%	1/6W
R186	1-247-891-00	CARBON	330K	5%	1/6W
R187	1-247-119-00	CARBON	330	5%	1/4W
R189	1-247-879-00	CARBON	100K	5%	1/6W
R191	1-214-777-00	METAL	100K	1%	1/4W
R192	1-214-785-00	METAL	220K	1%	1/4W
R193	1-214-735-00	METAL	1.8K	1%	1/4W
R194	1-214-744-00	METAL	4.3K	1%	1/4W
R195	1-247-902-00	CARBON	910K	5%	1/6W
R201	1-246-506-00	CARBON	24K	5%	1/4W
R202	1-246-512-00	CARBON	43K	5%	1/4W
R203	1-247-155-00	CARBON	10K	5%	1/4W
R204	1-247-115-00	CARBON	220	5%	1/4W
R205	1-247-167-00	CARBON	33K	5%	1/4W
R206	1-246-537-00	CARBON	470K	5%	1/4W
R207	1-246-485-00	CARBON	3.3K	5%	1/4W
R208	1-246-545-00	CARBON	1M	5%	1/4W
R209	1-247-151-00	CARBON	6.8K	5%	1/4W
R210	1-247-119-00	CARBON	330	5%	1/4W
R211	1-247-165-00	CARBON	27K	5%	1/4W
R212	1-247-107-00	CARBON	100	5%	1/4W
R213	1-246-524-00	CARBON	130K	5%	1/4W
R214	1-246-490-00	CARBON	5.1K	5%	1/4W
R215	1-246-504-00	CARBON	20K	5%	1/4W
R216	1-246-530-00	CARBON	240K	5%	1/4W
R217	1-246-499-00	CARBON	12K	5%	1/4W
R218	1-247-155-00	CARBON	10K	5%	1/4W
R221	1-247-831-00	CARBON	1K	5%	1/6W
R222	1-246-466-00	CARBON	510	5%	1/4W
R223	1-214-731-00	METAL	1.2K	1%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R224	1-247-886-00	CARBON	200K	5%	1/6W
R225	1-247-888-00	CARBON	240K	5%	1/6W
R226	1-247-887-00	CARBON	220K	5%	1/6W
R227	1-247-845-00	CARBON	3.9K	5%	1/6W
R228	1-247-886-00	CARBON	200K	5%	1/6W
R229	1-247-887-00	CARBON	220K	5%	1/6W
R230	1-214-753-00	METAL	10K	1%	1/4W
R231	1-247-820-00	CARBON	360	5%	1/6W
R232	1-247-845-00	CARBON	3.9K	5%	1/6W
R233	1-246-490-00	CARBON	5.1K	5%	1/4W
R234	1-246-480-00	CARBON	2K	5%	1/4W
R235	1-247-171-00	CARBON	47K	5%	1/4W
R236	1-214-776-00	METAL	91K	1%	1/4W
R237	1-247-149-00	CARBON	5.6K	5%	1/4W
R238	1-246-483-00	CARBON	2.7K	5%	1/4W
R239	1-246-537-00	CARBON	470K	5%	1/4W
R240	1-214-763-00	METAL	27K	1%	1/4W
R241	1-246-466-00	CARBON	510	5%	1/4W
R242	1-214-729-00	METAL	1K	1%	1/4W
R243	1-247-139-00	CARBON	2.2K	5%	1/4W
R251	1-247-155-00	CARBON	10K	5%	1/4W
R252	1-247-147-00	CARBON	4.7K	5%	1/4W
R253	1-247-139-00	CARBON	2.2K	5%	1/4W
R254	1-247-155-00	CARBON	10K	5%	1/4W
R255	1-247-831-00	CARBON	1K	5%	1/6W
R256	1-246-529-00	CARBON	220K	5%	1/4W
R257	1-246-478-00	CARBON	1.6K	5%	1/4W
R258	1-247-159-00	CARBON	15K	5%	1/4W
R259	1-247-857-00	CARBON	12K	5%	1/6W
R260	1-247-807-00	CARBON	100	5%	1/6W
R261	1-247-852-00	CARBON	7.5K	5%	1/6W
R262	1-247-791-00	CARBON	22	5%	1/6W
R263	1-247-848-00	CARBON	5.1K	5%	1/6W
R264	1-247-857-00	CARBON	12K	5%	1/6W
R265	1-247-791-00	CARBON	22	5%	1/6W
R266	1-247-838-00	CARBON	2K	5%	1/6W
R267	1-247-843-00	CARBON	3.3K	5%	1/6W
R268	1-247-841-00	CARBON	2.7K	5%	1/6W
R269	1-247-815-00	CARBON	220	5%	1/6W
R270	1-247-864-00	CARBON	24K	5%	1/6W
R271	1-247-891-00	CARBON	330K	5%	1/6W
R272	1-247-139-00	CARBON	2.2K	5%	1/4W
R276	1-247-155-00	CARBON	10K	5%	1/4W
R277	1-247-867-00	CARBON	33K	5%	1/6W
R278	1-246-529-00	CARBON	220K	5%	1/4W

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA---: μA---, UPA---: μPA---, UPC---: μPC,
UPD---: μPD---

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R279	1-247-167-00	CARBON	33K	5%	1/4W
R280	1-247-179-00	CARBON	100K	5%	1/4W
R281	1-247-107-00	CARBON	100	5%	1/4W
R282	1-247-155-00	CARBON	10K	5%	1/4W
R283	1-247-871-00	CARBON	47K	5%	1/6W
R284	1-247-857-00	CARBON	12K	5%	1/6W
R285	1-247-791-00	CARBON	22	5%	1/6W
R286	1-247-891-00	CARBON	330K	5%	1/6W
R287	1-247-119-00	CARBON	330	5%	1/4W
R289	1-247-879-00	CARBON	100K	5%	1/6W
R291	1-214-777-00	METAL	100K	1%	1/4W
R292	1-214-785-00	METAL	220K	1%	1/4W
R293	1-214-735-00	METAL	1.8K	1%	1/4W
R294	1-214-744-00	METAL	4.3K	1%	1/4W
R295	1-247-902-00	CARBON	910K	5%	1/6W
R301	1-246-482-00	CARBON	2.4K	5%	1/4W
R302	1-246-499-00	CARBON	12K	5%	1/4W
R303	1-247-139-00	CARBON	2.2K	5%	1/4W
R304	1-246-500-00	CARBON	13K	5%	1/4W
R305	1-247-855-00	CARBON	10K	5%	1/6W
R306	1-247-831-00	CARBON	1K	5%	1/6W
R307	1-247-838-00	CARBON	2K	5%	1/6W
R308	1-247-863-00	CARBON	22K	5%	1/6W
R309	1-247-843-00	CARBON	3.3K	5%	1/6W
R311	1-247-845-00	CARBON	3.9K	5%	1/6W
R312	1-247-855-00	CARBON	10K	5%	1/6W
R313	1-247-855-00	CARBON	10K	5%	1/6W
R315	1-247-873-00	CARBON	56K	5%	1/6W
R316	1-247-873-00	CARBON	56K	5%	1/6W
R317	1-217-527-00	FUSIBLE	22	5%	1/4W
R324	1-247-848-00	CARBON	5.1K	5%	1/6W
R325	1-247-848-00	CARBON	5.1K	5%	1/6W
R326	1-247-848-00	CARBON	5.1K	5%	1/6W
R327	1-247-845-00	CARBON	3.9K	5%	1/6W
R328	1-247-823-00	CARBON	470	5%	1/6W
R331	1-247-115-00	CARBON	220	5%	1/4W
R332	1-247-115-00	CARBON	220	5%	1/4W
R336	1-247-843-00	CARBON	3.3K	5%	1/6W
R337	1-247-847-00	CARBON	4.7K	5%	1/6W
R338	1-247-875-00	CARBON	68K	5%	1/6W
R339	1-247-831-00	CARBON	1K	5%	1/6W
R340	1-247-831-00	CARBON	1K	5%	1/6W
R341	1-247-831-00	CARBON	1K	5%	1/6W
R342	1-247-847-00	CARBON	4.7K	5%	1/6W
R343	1-247-847-00	CARBON	4.7K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R344	1-247-871-00	CARBON	47K	5%	1/6W
R501	1-247-147-00	CARBON	4.7K	5%	1/4W
R502	1-247-107-00	CARBON	100	5%	1/4W
R503	1-247-171-00	CARBON	47K	5%	1/4W
R505	1-247-131-00	CARBON	1K	5%	1/4W
R506	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R507	1-247-131-00	CARBON	1K	5%	1/4W
R508	1-212-956-00	FUSIBLE	8.2	5%	1/2W F
R509	1-247-145-00	CARBON	3.9K	5%	1/4W
R510	1-212-956-00	FUSIBLE	8.2	5%	1/2W F
R511	1-247-131-00	CARBON	1K	5%	1/4W
R513	1-247-155-00	CARBON	10K	5%	1/4W
R514	1-214-753-00	METAL	10K	1%	1/4W
R515	1-214-154-00	METAL	8.2K	1%	1/4W
R516	1-214-754-00	METAL	11K	1%	1/4W
R517	1-247-167-00	CARBON	33K	5%	1/4W
R518	1-247-145-00	CARBON	3.9K	5%	1/4W
R519	1-246-505-00	CARBON	22K	5%	1/4W
R520	1-247-147-00	CARBON	4.7K	5%	1/4W
R521	1-247-155-00	CARBON	10K	5%	1/4W
R524	1-247-147-00	CARBON	4.7K	5%	1/4W
R525	1-247-147-00	CARBON	4.7K	5%	1/4W
R526	1-247-167-00	CARBON	33K	5%	1/4W
R527	1-246-511-00	CARBON	39K	5%	1/4W
R528	1-246-455-00	CARBON	180	5%	1/4W
R529	1-246-545-00	CARBON	1M	5%	1/4W
R530	1-246-500-00	CARBON	13K	5%	1/4W
R531	1-246-500-00	CARBON	13K	5%	1/4W
R532	1-246-500-00	CARBON	13K	5%	1/4W
R533	1-246-505-00	CARBON	22K	5%	1/4W
R534	1-246-505-00	CARBON	22K	5%	1/4W
R535	1-246-505-00	CARBON	22K	5%	1/4W
R536	1-246-505-00	CARBON	22K	5%	1/4W
R537	1-246-505-00	CARBON	22K	5%	1/4W
R538	1-246-505-00	CARBON	22K	5%	1/4W
R539	1-246-505-00	CARBON	22K	5%	1/4W
R540	1-246-505-00	CARBON	22K	5%	1/4W
R541	1-246-505-00	CARBON	22K	5%	1/4W
R542	1-246-505-00	CARBON	22K	5%	1/4W
R543	1-246-505-00	CARBON	22K	5%	1/4W
R544	1-246-505-00	CARBON	22K	5%	1/4W
R545	1-246-505-00	CARBON	22K	5%	1/4W
R546	1-246-505-00	CARBON	22K	5%	1/4W
R547	1-246-505-00	CARBON	22K	5%	1/4W
R548	1-246-505-00	CARBON	22K	5%	1/4W

NOTE:

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- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μF .

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
UA....: μA ..., UPA....: μPA ..., UPC....: μPC ,
UPD....: μPD ...

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R549	1-246-505-00	CARBON	22K	5%	1/4W
R550	1-247-115-00	CARBON	220	5%	1/4W
R551	1-247-115-00	CARBON	220	5%	1/4W
R552	1-247-115-00	CARBON	220	5%	1/4W
R553	1-247-115-00	CARBON	220	5%	1/4W
R554	1-247-115-00	CARBON	220	5%	1/4W
R555	1-247-115-00	CARBON	220	5%	1/4W
R556	1-247-115-00	CARBON	220	5%	1/4W
R557	1-247-147-00	CARBON	4.7K	5%	1/4W
R558	1-247-147-00	CARBON	4.7K	5%	1/4W
R559	1-247-147-00	CARBON	4.7K	5%	1/4W
R560	1-247-147-00	CARBON	4.7K	5%	1/4W
R561	1-247-131-00	CARBON	1K	5%	1/4W
R563	1-247-171-00	CARBON	47K	5%	1/4W
R566	1-247-131-00	CARBON	1K	5%	1/4W
R567	1-247-155-00	CARBON	10K	5%	1/4W
R568	1-247-155-00	CARBON	10K	5%	1/4W
R569	1-247-155-00	CARBON	10K	5%	1/4W
R570	1-247-131-00	CARBON	1K	5%	1/4W
R571	1-247-131-00	CARBON	1K	5%	1/4W
R572	1-247-131-00	CARBON	1K	5%	1/4W
R573	1-247-155-00	CARBON	10K	5%	1/4W
R574	1-247-119-00	CARBON	330	5%	1/4W
R575	1-246-468-00	CARBON	620	5%	1/4W
R576	1-247-131-00	CARBON	1K	5%	1/4W
R578	1-247-179-00	CARBON	100K	5%	1/4W
R579	1-247-131-00	CARBON	1K	5%	1/4W
R580	1-247-155-00	CARBON	10K	5%	1/4W
R581	1-247-171-00	CARBON	47K	5%	1/4W
R582	1-247-131-00	CARBON	1K	5%	1/4W
R583	1-206-473-00	METAL OXIDE	27	5%	2W F
R585	1-247-179-00	CARBON	100K	5%	1/4W
R586	1-247-131-00	CARBON	1K	5%	1/4W
R587	1-247-155-00	CARBON	10K	5%	1/4W
R588	1-247-171-00	CARBON	47K	5%	1/4W
R589	1-247-131-00	CARBON	1K	5%	1/4W
R590	1-247-107-00	CARBON	100	5%	1/4W
R591	1-247-107-00	CARBON	100	5%	1/4W
R592	1-246-531-00	CARBON	270K	5%	1/4W
R593	1-246-531-00	CARBON	270K	5%	1/4W
R594	1-247-171-00	CARBON	47K	5%	1/4W
R595	1-247-171-00	CARBON	47K	5%	1/4W
R596	1-246-505-00	CARBON	22K	5%	1/4W
R600	1-247-155-00	CARBON	10K	5%	1/4W
R601	1-247-123-00	CARBON	470	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R602	1-214-729-00	METAL	1K	1%	1/4W
R605	1-246-505-00	CARBON	22K	5%	1/4W
R606	1-246-492-00	CARBON	6.2K	5%	1/4W
R607	1-247-155-00	CARBON	10K	5%	1/4W
R608	1-247-179-00	CARBON	100K	5%	1/4W
R609	1-246-502-00	CARBON	16K	5%	1/4W
R611	1-247-147-00	CARBON	4.7K	5%	1/4W
R613	1-247-783-00	CARBON	10	5%	1/6W
R701	1-247-115-00	CARBON	220	5%	1/4W
R702	1-247-131-00	CARBON	1K	5%	1/4W
R703	1-247-155-00	CARBON	10K	5%	1/4W
R704	1-246-452-00	CARBON	130	5%	1/4W
R705	1-247-149-00	CARBON	5.6K	5%	1/4W
R706	1-246-495-00	CARBON	8.2K	5%	1/4W
R707	1-247-155-00	CARBON	10K	5%	1/4W
R708	1-247-155-00	CARBON	10K	5%	1/4W
R709	1-246-514-00	CARBON	51K	5%	1/4W
R710	1-246-514-00	CARBON	51K	5%	1/4W
R711	1-247-147-00	CARBON	4.7K	5%	1/4W
R712	1-247-155-00	CARBON	10K	5%	1/4W
R713	1-247-171-00	CARBON	47K	5%	1/4W
R714	1-247-131-00	CARBON	1K	5%	1/4W
R715	1-247-131-00	CARBON	1K	5%	1/4W
R716	1-247-171-00	CARBON	47K	5%	1/4W
R717	1-246-529-00	CARBON	220K	5%	1/4W
R718	1-246-505-00	CARBON	22K	5%	1/4W
R719	1-246-529-00	CARBON	220K	5%	1/4W
R720	1-247-159-00	CARBON	15K	5%	1/4W
R721	1-247-159-00	CARBON	15K	5%	1/4W
R722	1-247-147-00	CARBON	4.7K	5%	1/4W
R723	1-247-131-00	CARBON	1K	5%	1/4W
R805	1-247-875-00	CARBON	68K	5%	1/6W
R806	1-247-875-00	CARBON	68K	5%	1/6W
R807	1-246-458-00	CARBON	240	5%	1/4W
R808	1-247-895-00	CARBON	470K	5%	1/6W
R809	1-247-872-00	CARBON	51K	5%	1/6W
R810	1-247-872-00	CARBON	51K	5%	1/6W
R811	1-247-861-00	CARBON	18K	5%	1/6W
R812	1-247-847-00	CARBON	4.7K	5%	1/6W
R813	1-247-863-00	CARBON	22K	5%	1/6W
R814	1-247-863-00	CARBON	22K	5%	1/6W
R815	1-247-863-00	CARBON	22K	5%	1/6W
R816	1-247-863-00	CARBON	22K	5%	1/6W
R817	1-247-863-00	CARBON	22K	5%	1/6W
R818	1-247-863-00	CARBON	22K	5%	1/6W
R819	1-246-443-00	CARBON	56	5%	1/4W

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- MMH : mH, UH : μH

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
R820	1-246-443-00	CARBON 56 5% 1/4W
R821	1-247-863-00	CARBON 22K 5% 1/6W
R822	1-202-862-00	SOLID 220 1/4W F
RV101	1-228-542-00	RES, ADJ, METAL GLAZE 10K
RV102	1-228-542-00	RES, ADJ, METAL GLAZE 10K
RV103	1-226-236-00	RES, ADJ, CARBON 10K
RV201	1-228-542-00	RES, ADJ, METAL GLAZE 10K
RV202	1-228-542-00	RES, ADJ, METAL GLAZE 10K
RV203	1-226-236-00	RES, ADJ, CARBON 10K
RV701	1-226-236-00	RES, ADJ, CARBON 10K
RY1	1-515-323-00	RELAY
S001	1-553-318-00	SWITCH, PUSH (AC POWER) (1 KEY)
S601	1-554-208-00	SWITCH, SLIDE (TIMER)
S701	1-554-649-00	SWITCH, PUSH (4 KEY) (REV MODE)
S702	1-554-649-00	SWITCH, PUSH (4 KEY) (REV MODE)
S703	1-554-649-00	SWITCH, PUSH (4 KEY) (REV MODE)
S704	1-554-649-00	SWITCH, PUSH (4 KEY) (REV MODE)
S802	1-554-303-00	SWITCH, KEY BOARD
S803	1-554-303-00	SWITCH, KEY BOARD
S804	1-554-303-00	SWITCH, KEY BOARD
S805	1-554-303-00	SWITCH, KEY BOARD
S806	1-554-303-00	SWITCH, KEY BOARD
S807	1-554-303-00	SWITCH, KEY BOARD
S808	1-554-303-00	SWITCH, KEY BOARD
S809	1-554-303-00	SWITCH, KEY BOARD
S810	1-554-303-00	SWITCH, KEY BOARD
S811	1-554-303-00	SWITCH, KEY BOARD
S812	1-554-303-00	SWITCH, KEY BOARD
S813	1-554-303-00	SWITCH, KEY BOARD
S814	1-554-303-00	SWITCH, KEY BOARD
S815	1-554-303-00	SWITCH, KEY BOARD
S816	1-554-303-00	SWITCH, KEY BOARD
S817	1-554-303-00	SWITCH, KEY BOARD
S818	1-554-303-00	SWITCH, KEY BOARD
S819	1-554-303-00	SWITCH, KEY BOARD
S820	1-554-303-00	SWITCH, KEY BOARD
S821	1-554-303-00	SWITCH, KEY BOARD
S822	1-554-303-00	SWITCH, KEY BOARD
S823	1-554-303-00	SWITCH, KEY BOARD
S824	1-554-303-00	SWITCH, KEY BOARD
S825	1-554-303-00	SWITCH, KEY BOARD

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S901	1-554-303-00	SWITCH, KEY BOARD
S1001	1-554-205-00	SWITCH, PUSH (LEVER DET)
S1002	1-554-205-00	SWITCH, PUSH (LEVER DET)
S1003	1-554-205-00	SWITCH, PUSH (LEVER DET)
S1004	1-554-205-00	SWITCH, PUSH (LEVER DET)
S1005	1-554-205-00	SWITCH, PUSH (LEVER DET)
S1006	1-516-323-XX	SLIDE SWITCH (DIR)
SSF102	1-235-186-00	ENCAPSULATED COMPONENT
SSF202	1-235-186-00	ENCAPSULATED COMPONENT
T301	1-433-277-00	TRANSFORMER, BIAS OSCILLATOR
X501	1-567-160-00	OSCILLATOR, CERAMIC

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: $\mu\mu\text{F}$.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
UA....: μA ..., UPA....: μPA ..., UPC....: μPC ,
UPD....: μPD ...

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Sony Corporation

Technik als Verkaufsargument

Produktart:

HIFI / TC

T C - F X 7 0 7 R

QUICK-REVERSE-SYSTEM

Unter der Typenbezeichnung TC-FX-707R bietet Sony ein HiFi-Cassettendeck mit Reverse-Funktion für Aufnahme und Wiedergabe an. Neben vielen Ausstattungsmerkmalen für die neueste und hochwertigste Technik eingesetzt wird wie z.B.

- Memory-Funktionen zum Abspeichern von Aufnahme- bzw. Wiedergabeeinstellungen (z.B. Bandart, Line Out Pegel usw.)
- Fader-Funktion zum weichen Ein- und Ausblenden
- Digital-Level-Monitor
Hier werden alle wichtigen Werte und Einstellungen angezeigt (Rec-Level, Line Out Pegel, Dolby usw.)
- Laufwerkfunktions-Speicher
bis zu 8 Laufwerkfunktionen sind abzuspeichern und können hintereinander abgerufen werden

besitzt dieser Recorder ein **Quick-Reverse-System**.

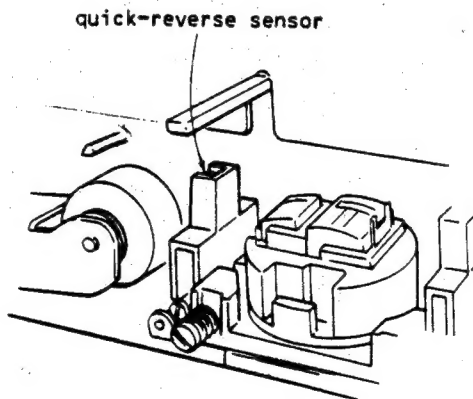
Welche Überlegung steht dahinter?

Logischerweise ist ein im Auto-Reverse-Betrieb arbeitender Recorder für die Aufnahmefunktion nur dann interessant, wer während der Aufnahme schnellstens bei Bandende auf Reverse-Betrieb - also in die andere Laufrichtung - umgeschaltet wird. Bei den meisten Recordern erfolgt diese Umschaltung allerdings erst, wenn der Cassettenlauf anhält. Da jede gute Cassette jedoch ein Vor- bzw. Nachspannband besitzt, geht wertvolle Zeit verloren, in der nichts aufgezeichnet wird. Darum entwickelte SONY ein Quick-Reverse-System, das wie nachfolgend beschrieben arbeitet:

Technik als Verkaufsargument

- Seite 2 -

Bezogen auf die normale Vorwärts-Laufrichtung sitzt vor der Kopfeinheit ein Infrarotsensor, dem gegenüber ein Reflektor angeordnet ist. Da die Oberflächen und damit auch die optischen Eigenschaften des Magnet- und des Vorspannbandes unterschiedlich sind, kann dieser Sensor erkennen, wann das Magnetband aufhört. Diese Information wird an die Systemkontrollsteuerung weitergegeben. Die Folge hiervon ist, daß der Recorder am Ende des Magnetbandes, also bevor der Cassettenlauf anhält, schon auf die Reverselaufrichtung schaltet und nur mit minimaler Unterbrechung weiter aufzeichnet. Dieses **Quick-Reverse-System** kann ein- oder ausgeschaltet werden. Im abgeschalteten Zustand wechselt der Recorder, wie die meisten seiner Mitstreiter erst beim Anhalten des Cassettenlaufs. Die nachfolgende Skizze zeigt die Anordnung des Quick-Reverse-Sensors auf der Kopf-Basis-Platte.



WE/kr. 08'84